

ROSES FOR ALL AMERICAN CLIMATES



GEORGE C. THOMAS, JR.

**ROSES FOR ALL
AMERICAN CLIMATES**

•The M Co.
9

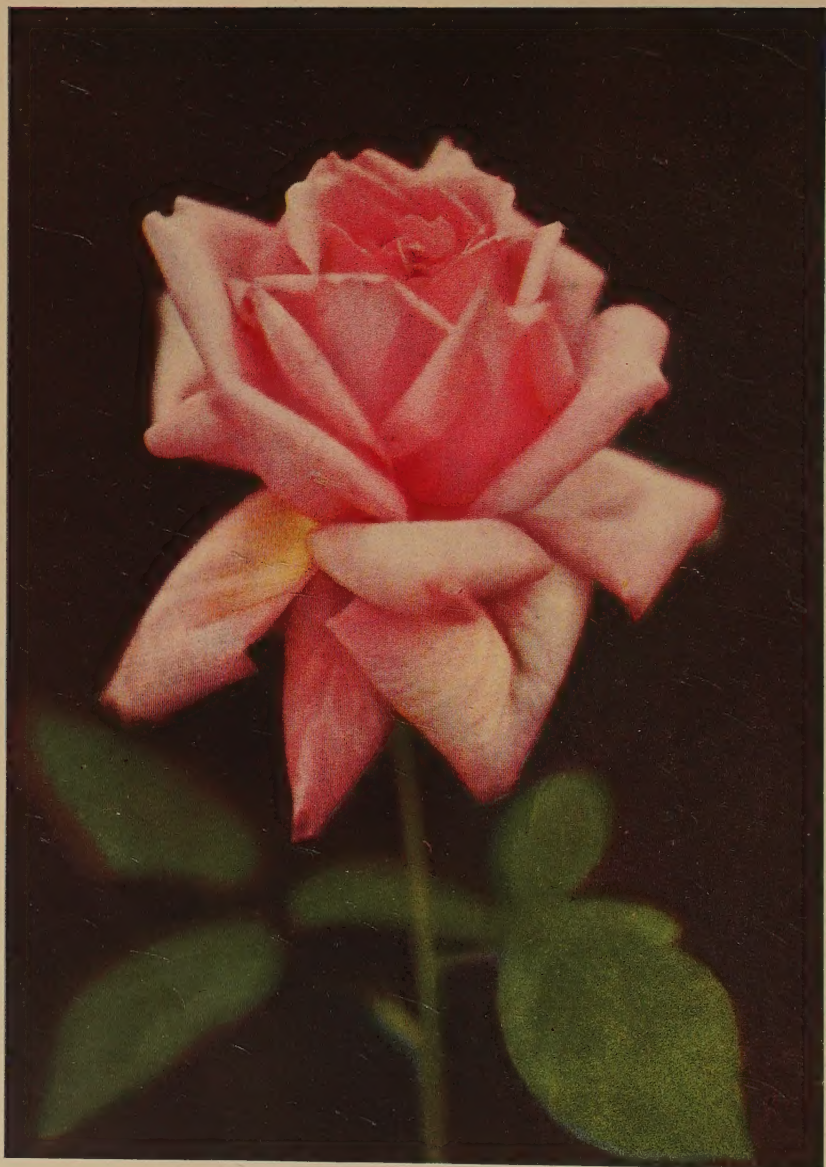


PLATE I. DEAN HOLE, HT. (See page 76.)

ROSES FOR ALL AMERICAN CLIMATES

BY
GEORGE C. THOMAS, JR.

AUTHOR OF
"THE PRACTICAL BOOK OF OUTDOOR ROSE-GROWING
FOR THE HOME GARDEN"



New York
THE MACMILLAN COMPANY
LONDON: MACMILLAN & CO., LTD.

All rights reserved

COPYRIGHT, 1924
By THE MACMILLAN COMPANY

Set up and electrotyped. Published May, 1924



Mount Pleasant Press
J. Horace McFarland Company
Harrisburg, Pa.

635.9333
T456

THIS BOOK
IS AFFECTIONATELY DEDICATED TO

Dr. Robert Huey

OF PHILADELPHIA
WHOSE COUNSEL AND HELP
MADE IT POSSIBLE

56929

FOREWORD

NOTHING is more certain than that in the wide climatic range of the United States all roses will not flourish equally well everywhere. Indeed, the lack of success in rose-growing too often met with is properly attributable, to a great extent, to climatic inadaptability of the varieties used. Up to the present, it is believed that no comprehensive work has been published which deals carefully with each different climatic condition, the purpose of this book.

It has been the aim of this work to go most thoroughly into the selection of varieties, and, in addition, to give enough information on the propagation and care of roses to enable the amateur rose-grower properly to select the sorts most adaptable to his district, and to grow them successfully.

The descriptions of each class are made up from personal tests of over fifteen years in the Central Zone (from Philadelphia north to Massachusetts), and of close to five years in California. In addition, the writer has traveled and made careful notes from the southern shore of the Gulf of St. Lawrence in the north, to Mexico in the south, with trips by

motor from Philadelphia to New Orleans and through the West, and from Victoria, British Columbia, to the Mexican line. The Pacific and Canadian Northwest have likewise been visited.

Besides personal operation and observation, much correspondence has been carried on with rose-lovers all over our land, and also in Europe and Australia, for more than ten years. Rose literature has been carefully studied. In this connection it has been found that the data from the English Rose Annual are valuable for our Northwest and for some parts of the Central Zone, while the very full information given by Hazlewood Bros., of Epping, New South Wales, and the National Rose Society lists of roses used in Australia, are indispensable as suggestions for our own South.

The catalogue of Bobbink & Atkins, with its full and accurate descriptions, has been used, with their permission, to check up with our findings. In addition, this firm has provided valuable data regarding the hardiness of roses in their section. These courtesies are here thankfully acknowledged.

Sincere thanks are likewise due to both amateur and trade rose-lovers throughout the United States for help in reporting tests and conditions as to different varieties in their sections. It would be

difficult to mention personally all those who have been of great help in this matter, but the aid of Jesse A. Currey, of Portland, Oregon, has been of the utmost importance.

Special thanks are accorded J. Horace McFarland, the editor of the American Rose Annual, not only for his aid in editing this work, but also for his invaluable cooperation for many years in the securing of information, and for the use of many quotations from the American Rose Annual.

Where varieties which are recommended are difficult to secure, and it is known where such may be obtained, the names and addresses of the growers are listed. In this connection, it must be stated that Fred H. Howard, of Howard & Smith, Los Angeles, California, has given most useful data in the descriptions of new roses, and has, as well, rendered the rose-world most important aid by propagating varieties suggested by the writer.

J. D. Eisele, of Henry A. Dreer, Inc., Philadelphia, Pennsylvania, has kindly permitted the use of his findings on the hardiness and growth of roses as tested by him. It should be noted that Howard & Smith and the Dreer firm carry on their valuable tests jointly in Philadelphia and California.

Certain of the illustrations have been made with the object of showing the faults of different roses,

such as weak stems, weak necks, the roses which open too quickly, roses which burn and ball, roses which show mildew, etc.; others are added to bring the reader into contact with all the various classes of roses; and the illustrations in color are mostly from direct autochromes made in the gardens of the author, and previously used in "The Practical Book of Outdoor Rose-Growing," which work is supplanted by the later data and longer experience here included.

February, 1924

G. C. T., JR.

CONTENTS

CHAPTER	PAGE
I. Climatic Conditions	1
II. Climatic Conditions Affecting Climbing Roses	23
III. The Northern Zone	28
IV. The Central Zone	32
V. The Southeastern Zone	36
VI. The Pacific Northwestern Zone	40
VII. The Pacific Southwestern Zone	43
VIII. The Interior-Southern Zone	47
IX. The Hybrid Perpetual Roses	51
X. The Hybrid Tea Roses	69
XI. The Tea Roses	108
XII. The Austrian Briers and Their Hybrids	127
XIII. Additional Classes of Roses	142
XIV. Tender Climbing Roses	154
XV. Hardy Climbing Roses	171
XVI. The Rugosa Roses	184
XVII. The Dwarf Polyantha Roses	191
XVIII. Rose Propagation and Understocks	199
XIX. Rose-Beds, Planting, and First Care	213
XX. The General Care of Roses	225

ILLUSTRATIONS

In color and in sepia

	FACING PAGE
Dean Hole, HT. (I) <i>Colored frontispiece</i>	
Views in two rose-gardens. (II)	1
Souvenir du Président Carnot, HT., in old, established garden. (III)	16
Roses as affected by July temperatures in Pacific Southwest. (IV)	21
Roses as affected by adverse climates. (V)	28
Roses as affected by adverse climates. (VI)	49
George Dickson, HP. (VII) <i>In color</i>	56
Photographs of selected blooms grown under ideal conditions. (VIII)	64
Different colored blooms produced by two Hybrid Tea seedlings grown from seed of the same seed-hip. (IX) . <i>In color</i>	69
Lady Pirrie, HT. (X) <i>In color</i>	76
Mme. Segond Weber, HT. (XI) <i>In color</i>	85
Ophelia, HT. (XII) <i>In color</i>	92
Pharisaer, HT. (XIII) <i>In color</i>	100
Hybrid Sweetbrier Roses and Baronesse van Ittersum, Mult., in Central Zone. (XIV)	113
Dwarf Polyantha, Hybrid Rugosa, and China Roses. (XV) .	128
Lyon Rose, H.AB. (Per.) (XVI) <i>In color</i>	133
Thomasville Rose-Garden, Georgia. (XVII)	145
Bloomfield Progress, HT., grown under ideal conditions in Central Zone. (XVIII)	160
Photographs of selected blooms grown under ideal con- ditions. (XIX)	177
Roses in the Northern, Central, and Pacific Northwestern Zones. (XX)	192
Two Climbing Teas, Mme. Jules Gravereaux and Gloire de Dijon. (XXI)	209
Cl. Mme. Mélanie Soupert in Central Zone. (XXII)	224
Frau Karl Druschki, HP., and Cl. Gruss an Teplitz, Cl.HT., in Central Zone. (XXIII)	229
Climbing Roses. (XXIV)	236





PLATE II. Above: Westgate, near Santa Monica, California.—Rose-garden three months after planting. Below: Chestnut Hill, Pennsylvania.—Two-year-old rose-garden

ROSES FOR ALL AMERICAN CLIMATES

CHAPTER I

CLIMATIC CONDITIONS

THE history of roses in America has been more or less a question of the survival of the fittest. Originally, we imported most of our roses from Europe, and tried them all over the country, with varying results. All our literature was imported from the same centers as those from which we procured our plants, and, in most cases, treated of the rose in the English climate alone.

For this reason we have best developed, in districts adaptable to their culture, the classes and varieties suitable to the English climate, while other parts of our vast country, with different conditions, have not advanced properly in rose-culture, though there existed fine opportunity for special classes to flourish in many such districts.

It may be said, broadly, that the Hybrid Perpetual class has been found to do best in the extreme North, on account of its ability to resist cold; that the Tea is most successful in the

2 ROSES FOR ALL AMERICAN CLIMATES

South, because of its long blooming season; and that the Hybrid Tea flourishes more nearly over the entire country where properly nurtured and protected.

In climbers, we have learned about the same lesson, with the hardy climbers in the North and the everblooming varieties for the South.

Our lists, however, did not for many years consider the other important characteristics which are really necessary to select proper varieties of roses for any given section.

To be sure, along the Atlantic seaboard and in the Middle Atlantic States, we had fine and careful experimenters in the persons of Dr. Robert Huey, of Philadelphia, and the late Admiral Aaron Ward, of Long Island, and until 1900 these men were pioneers in such rose sections; but, up to this time, little had been heard from the remainder of the country as to the best varieties for different sections, as each district fought out the battle of elimination by itself.

In 1901, the writer started a series of experiments in selection of varieties, culminating in the publishing of "The Practical Book of Outdoor Rose-Growing" in 1914, containing up-to-date lists of varieties for the Middle Atlantic States, and suggestions for other sections. (Passing through

several editions, it is now superseded by this work.)

In 1916, the American Rose Annual began its good work, and various experimenters and test-gardens and writers throughout the country showed evidence of the growing interest in rose-culture in a determination to grow roses everywhere.

In the Northwest, the city of Portland did some very wonderful things, and there Jesse A. Currey not only aided in rose-work, but eventually brought about the establishment of the International Rose-Test Garden.

A few men began to breed American roses and were quite successful with their productions in America and also in Europe.

Evidence from all over the country began and has continued to pour in, making it increasingly apparent that selected lists of roses for each section of the land were most needed.

Since the fall of 1919, the writer has pursued every available source of information in order to reach definite conclusions, and it has been possible to prepare a list of rules to cover necessary rose characteristics for the entire country.

As has been stated, it is very evident that different virtues and failings in roses are increased by climatic conditions, and it is also quite plain that

4 ROSES FOR ALL AMERICAN CLIMATES

no matter how carefully a general list is prepared, in the course of a few years it will be more or less obsolete, because of the many new introductions—although it must be said that our list is now so complete as to make new introductions far less important than heretofore.

It has, therefore, seemed logical and desirable to prepare a complete list of roses for present use, and in doing so to give each main climatic division a separate schedule of varieties, such roses being chosen by a set of rules established by the characteristics of each rose for climatic conditions. Such lists, used in conjunction with the rules set forth, will also act as guides in the future for the selection of new varieties.

In this connection it must be emphasized that no new roses should be planted except as a test, unless they conform to such rules, and that even then it is far better to test carefully a few plants each of any new kinds before recommending them.

THE CLIMATIC ZONES

The first step is to divide the country into the fewest number of climatic zones, in each of which the conditions for rose-culture will be different from each other zone, but enough alike throughout the

zone to enable any rose recommended to do well in any part of it.

Naturally, these zones will overlap to a certain extent, and, in addition, widely separated districts will often have similar climatic conditions.

The climatic conditions affecting roses may briefly be summarized as follows:

Extreme cold, with varying frost conditions, making it necessary to select proper roses for such cold differences. Not only do varieties winter-kill during the dormant season in varying degree, but late light frosts, after early growing weather, kill back certain kinds more than others.

Extreme heat has various deleterious results. It causes some varieties to die back. It causes serious loss of foliage to many varieties, especially under hot, dry conditions. (This, however, may be controlled by proper watering.) It causes blooms of certain classes and varieties to open too soon, to lose form, color, and perfume, and to wilt quickly; extremely hot winds discolor certain tender varieties.

On the other hand, heat is beneficial to many roses. It causes tightly rolled blooms of great petalage to open properly, and, when combined with dryness, it aids in the growing of varieties subject to mildew.

Dampness, if too prolonged, is the cause of

mildew, of roses failing to open, and, if accompanied with wind, often injures the petals of light-colored varieties by discoloration. It further increases black-spot* and other fungous diseases.

Rain discolors many varieties and causes mildew.

Short growing seasons in the North make it less necessary for roses to bloom over a very long period and render varieties which lose foliage less objectionable.

Long growing seasons, per contra, require varieties to bloom for extremely long periods and to hold foliage tenaciously.

Dryness tends to the prevention of mildew and balling†, and, as found in high altitudes, greatly improves some varieties which have these faults. Also, some kinds, impatient of too cold a dampness, increase their bloom under equable dry conditions.

The best rose conditions are a cool, equable climate, without extremes of cold or heat, wind, or too great dampness.

Having considered these main factors, let us divide our country into the different climatic belts:

No. 1, the NORTHERN ZONE, includes the extreme

*Black-spot is a serious fungous disease within the leaf tissues of roses, evidenced by irregular yellow and black patches. It destroys the foliage and seriously weakens the plant. See Chapter XXI for control methods. Mildew is another fungous trouble on, not in, the leaves. It can be controlled.

†"Balling" occurs when the central petals of a bloom stick together and refuse to open.

north, or mountainous districts in other sections, where the severe cold in winter is the dominating factor. Here the temperature goes well below zero for long periods, the growing season is short, and hot spells are of short duration. The cold nights and the lack of heat indicate the need for roses free from mildew or balling, except in high altitudes where the dryness helps to overcome these faults.

For this zone, the characteristics necessary are plainly evident: Extreme hardiness; resistance to mildew (except as noted in dry districts of high altitude); strong growth, on account of the short season; flowers without too full and closely rolled petalage, which need heat to open properly (thin roses of light petalage need not have extreme substance). Roses with short blooming periods are improved by the cool conditions and short season. Those which lose foliage are not severely censured. Fading and bluing* and opening too quickly are evils which count for less than further south.

No. 2, or the CENTRAL ZONE, is the district just south of the main northern division and, like mountainous climates in other sections or sea-coast areas in the Eastern North, with like extremes of cold. Here the cold does not go below

*"Bluing" is the term used to indicate a disposition of many red roses to quickly fade to an unpleasant purplish hue.

zero often, and then only for short periods. Mildew depends on the dampness, as in the Northern Zone, and it is very important to exclude varieties susceptible to it. The growing season is longer than in the North, and hot spells are of greater duration and more frequency.

The necessary characteristics of roses for the Central Zone are as follows:

Good hardiness; lack of mildew (except in rare cases of altitude); strong growth is not as important as in the North; roses with full and close petalage open more easily, owing to greater heat, but the thin varieties must have substance or they do not last. Many varieties become small in the humid heat, and fading and bluing and loss of perfume are increasingly apparent. Varieties must have continuous blooming periods. Loss of foliage is a fault to be deplored.

No. 3, the SOUTHEASTERN ZONE, comprises that area south of Washington near the coast, and such other southern sections as are not affected by dry and arid conditions, or with repeated frost after early growing weather. Twenty degrees above zero would be the low temperature level, and cold spells are of short and infrequent occurrence. The growing season is increasingly long, and heated periods are the rule and not the exception.

Rose characteristics for the Southeastern Zone may be summarized as follows:

Hardiness is of little moment; mildew resistance is not so important, except in early and late seasons (in altitudes, mildew is, of course, even less evident). Strong growth is not essential, owing to the long season. Roses of tight and full petalage mature well; thin roses must have fine substance to be considered at all, and then are only good early and late. Lack of size and fading and bluing are more disappointing than further north, and lack of perfume is a disadvantage during heat. Loss of foliage is a greater evil than in Zones Nos. 1 and 2.

Varieties with long and continuous blooming seasons are here most essential. Some roses which bloom only once in the Central North here give a second bloom, on account of the very long growing season.

No. 4 is the PACIFIC NORTHWESTERN ZONE, including the seacoast or bay districts of low altitude and sections of northern California with approximately the same climatic conditions. As a rule, in this section the cold in winter is not as severe as in the Central East, although the low levels are about the same, but extreme cold spells are of shorter duration, while the cool, moist summer is

very much on a par with the best of the English and Irish rose climates, and the very best results may be obtained with the roses which do well there. The summer is characterized by less severe heat than is the case in the Central Zone, so that this district has a lower heat maximum than almost any other part of our country, and is the finest summer rose climate in the United States.

Owing to the dampness, mildew is prevalent except in the almost rainless summer, and lack of much rain renders it possible to grow many light-colored roses to marvelous perfection because they will not discolor as in other sections subject to greater precipitation. The coolness, however, renders it less possible to grow those roses with great and close petalage to the perfection attained in hotter districts, and this is practically the only drawback to this climate, aside from its susceptibility to produce mildew.

The list of roses for this zone will include almost everything except those which are inclined to ball easily or exceptionally tender sorts, while those which do not have sufficient substance, or which are found to be flat in the humid East, are here of greatly improved substance and form. A notable example of this is General MacArthur, which is here very remarkable, while in the eastern

summer it becomes smaller and very flat. This rose has always been particularly popular in England, and the fact that it does well in Portland is a guide to the similarity of the climates.

Summarizing the qualifications of roses for this section, it might be said that, outside of those noted, all varieties will do well, and the cool climate renders loss of foliage negligible, while the growth of even ordinarily small-growing kinds is here found to be vastly increased.

It will also be noted in this favored district that many Hybrid Perpetuals extend their blooming season to great length, and the exhibition rose here is far and away superior, as a rule, to exhibition roses produced in any other part of our country, excepting, of course, in the most favored period of bloom in other districts.

No. 5 is the PACIFIC SOUTHWESTERN ZONE, including the coastal area which extends just south of the Pacific Northwestern Zone to the Mexican border, and runs inland only so far as the climate is affected by the ocean influence. In this connection it may be said this ocean influence is felt at different distances from the sea, depending on whether high mountains running along the coast keep it from penetrating into the interior, for where the land is fairly flat and the mountain ranges do not run

parallel with the coast, this influence, in the form of high fog, extends often twenty-five miles inland and affects the climatic conditions very considerably. This area has a very great immunity from frost extremes. It might be said that 20° above zero would be an extreme minimum, while, as an average, 25° would be the minimum, and favored localities would seldom go below 30° .

It will be understood that high altitudes in southern California have extreme low levels in the winter, and that where such frost is encountered, either the Central Zone or the Northern Zone would supply the list of roses needed. In this coastal area, the heat in summer is much less than the heat in the Central East, and when there is heat it is not accompanied with humidity. Nevertheless, on account of the high potency of the sun's rays, roses fade here almost as quickly as in the East.

Owing to the lack of frost and its great infrequency, certain parts of the district will produce roses the entire year, and it is possible to grow all of the most tender varieties without difficulty.

The requisites of rose varieties for this climate are briefly as follows:

Hardiness is of practically no moment; mildew is very important in early and late seasons, and,

owing to the coolness and dampness in the summer, is also a decided drawback during that period. The ocean winds, which carry dampness and are, in addition, extremely strong, often discolor roses of the lighter shades, and such must have protection from them.

Roses of thin petalage give better substance than in the East, although not as great substance as in the Northwest.

Dark colors may be here grown with success, although, on account of the fading above noted, lighter varieties are not so successful. Roses of tight and full petalage mature well in the late summer, although these may ball early and late. Lack of size would be noticeable in certain varieties in the middle of the season. The perfume, however, is generally very well developed in this district.

Loss of foliage, as in the South, is a most serious evil, and another very important matter is the necessity of giving roses a dormant season during summer, because, owing to the lack of frost and the encouragement of winter growth by rains, the rose has practically no rest season if watered through the entire summer. This forced dormancy has its disadvantages, because it is necessary to secure a rest period for roses of at least six weeks,

and during that time they lose their foliage and are, therefore, unattractive. It is, however, possible to withhold water from different beds at different times, and as the season without rain extends approximately from the first of May until the first or middle of October, one may put the rose out of commission at whatever time is most feasible, or, by withholding water from one bed at one time and another bed at another time, it will be possible to cut roses during the entire year, and to have only part of the rose-garden out of commission at a time.

Roses with long blooming seasons are here most necessary, although to a lesser degree than in the Interior South; certain varieties and classes with only one season of bloom either prolong that season or give a second bloom later in the year. Strong or large growers are not necessary, because the season is so long and so free from extremes that small-growing kinds attain great size.

No. 6 is the INTERIOR SOUTHERN ZONE. Here the cold extreme would be seldom much below 20° above zero, and the heat maximum well over 100°. This vast area practically comprises everything from the eastern seacoast south to the western seacoast south, and has two distinct features which are detrimental to the development of roses, and

which are not encountered elsewhere to any like extent.

The first is the almost certain likelihood of light frost in the spring, after growing weather has commenced. This characteristic is noted by W. C. Wood, of Danville, Kentucky, and has also been observed throughout many other parts of the section, notably in Oklahoma and Texas. To resist it requires roses of a particular kind of hardiness to avoid disappointment to growers in this zone. It would seem very advisable to include in lists for this section those roses which develop their blooms late in the season, as such kinds would be less liable to injury. Such a schedule would naturally include roses which start growth later than the average.

The other condition in this section is the prolonged dry season, often with extremely arid conditions, sometimes accompanied by hot winds. This makes it almost out of the question to consider the growing of anything but very double roses for cut-flower purposes, as varieties of thin petalage open very quickly, and even those which in other districts have great substance lose it here; single roses wilt quickly.

The arid condition also renders it most important to grow roses which do not fade and which have

good substance in their petals. This dryness, however, enables us to cultivate varieties which are elsewhere extremely susceptible to mildew, as, for example, Mrs. George Shawyer. The holding of foliage is of primary importance, and everblooming varieties are most necessary. Black-spot does not flourish as in moist heat.

It will be realized that it is almost impossible in all the zones to state exactly where one section commences and the other ends, and that adjacent areas overlap to a certain extent, often having conditions approaching those of the adjoining section. This overlapping is most prevalent between the Southwestern section and the Interior South where they join in southern California.

Growers must, therefore, consider, in the selection of their roses, whether or not they are subject to the cooling influence of the ocean fog, or whether they are beyond its influence. If they are within the ocean influence for only a part of the year, their conditions will be affected by this. As an illustration, it might be said that where this coolness prevails part of the year, and where arid conditions obtain during another period, it would be better for a rose-grower to content himself with kinds which are neither too thin in petalage nor which have too great petalage, because, in such a



PLATE III. Chestnut Hill, Pennsylvania.—*SOUVENIR DU PRESIDENT CARNOT*, HT., in foreground of old, established garden. (See page 101.)



section, a rose with a medium number of petals and good substance would open up fast enough in the damp season and not become flat and open too quickly during the hot conditions.

However, as it is impracticable to divide the country into too many zones, an arbitrary division has been made—one which supplies roses for the seacoast section and one for the arid regions.

If the reader has carefully studied these climatic details, he will be able to understand the type of rose which will do best in his section, and as it is out of the question to provide for all possible varieties of climate, it must be understood that just as it may be necessary in certain districts in California, as above explained, to plant roses for exceptional conditions, so throughout the remainder of the country there will be locations in which certain roses will do better than others. This whole study is to be construed with intelligence; it is not a "cure-all" proposition!

The main factors which go to produce roses successfully have been most carefully analyzed, and it is believed that the zones as above given will be found sufficient for all general purposes. In rose-growing, as in everything else, care and skill will be repaid, and in order to secure favorable results with one's plants it is most necessary that

the proper varieties should be selected. It should be emphasized again, and most carefully noted, that the situation of any district does not necessarily place it in the zone where it may be located geographically.

As mentioned before, mountainous districts in the extreme southern part of our country have climates which require roses of as great hardiness as those grown in the extreme North at a low altitude.

It is believed that the average rose-grower will be able, from these descriptions of rose characteristics and climatic effect thereon, to select kinds for his particular section, even if his conditions are somewhat different from the main zones as described. The Rose-Zone Map, as published in the 1920 American Rose Annual, is a splendid guide as regards hardiness.

In the lists which follow, the roses which are recommended are mostly well-established and well-tried varieties. New varieties have not been included, except where they have been tested to such an extent as to be absolutely dependable. The greatest mistake which a rose-grower can make, unless he wishes to experiment for the pleasure of doing so, is to depend upon new varieties which have not been grown in his neighborhood. It is

strongly urged that, before purchasing for his main planting any roses not recommended, the grower go and see such kinds actually growing in the nurseryman's garden; and, if possible, such visits should be made several times and under varying conditions. If new varieties are watched in this manner during the heat in the middle of summer and during cooler conditions in the fall, the various points noted in the characteristics of roses can be most thoroughly checked. Undoubtedly, many of the newer kinds are valuable, and where they have been found of merit are included in our lists.

In this connection it may be said that roses which are recommended by the National Rose Society of England are likely to do well in climates in this country which approximate the climate of England. In addition to this check, we have the very careful selections of the National Rose Society of New South Wales, which are valuable for hot conditions approximating those of our South and also for conditions resembling the climate of our southern seacoasts.

The descriptions given by Hazlewood Bros., of Epping, New South Wales, are, in the writer's opinion, the best ever published in a catalogue by any commercial grower. Our information pertain-

ing to New South Wales has been taken from their careful descriptions.

Concerning the increasing data furnished each year in the American Rose Annual by growers throughout the country, it gives the writer much pleasure to state that he has checked the articles carefully and has found that, with very few exceptions, the information as given by amateur growers is most accurate, and that all the articles in the Annual may be considered as a decided help for the various sections noted.

Anyone who really contemplates rose-growing seriously should join the American Rose Society, if only for the selfish motive of receiving the Rose Annual, and being thereby able to secure the information which it contains regarding various roses.*

In the same manner, the English Rose Annual is very valuable to anyone living in a climate approximating that of Great Britain.

In the making up of our lists, every book on roses has been carefully studied, but the descriptions have been made from personal observation throughout all sections of the United States, and after much correspondence with rose-growers in different parts of the country regarding their conditions.

*This may be accomplished by sending \$3 to the American Rose Society, West Grove, Pa.





PLATE IV. Roses as affected by July temperatures in Pacific Southwest
 1. William F. Dreer, HT. Neck very good; splendid specimen.
 2. Mme. Rutswell, T. Note absolutely perfect foliage and good cutting value.
 3. Senateur Museuraudi, HT. Much finer than in Central Zone.

Remember, however, that roses vary; they do so not only on account of the situations and the soils in which they are planted and the care which they receive, but, in addition, different plants vary. Because you see one rose of a certain variety doing well in your immediate neighborhood, do not consider this as a conclusive test. It is far better to see many of the variety growing in the field of the nurseryman from whom you propose to purchase it.

It would seem that the time had gone by when the so-called "decorative" roses would be considered to any great extent for small grounds. Certainly, the home rose-grower with limited space should not plant them. Roses good for cutting are also decorative, and by planting the number of bushes needed to give the desired quantity of blooms, one keeps them in proper shape as the flowers are cut. Decorative roses are of little value in the house; their stems are often short or weak; their petalage is thin; they open quickly and fade early; many have little or no perfume; they require constant trimming or the bushes will look badly, and there is little reward for such care. Outside of special uses, on large places, or in collections, it is best to plant kinds that are of some value for cutting.

One of the greatest joys that the flower-lover has is the production of beautiful blooms to take indoors, or to send or give to friends; therefore, plant varieties to give this pleasure. Who would not rather have twenty-five *Ophelia* blooms, perfect as cut flowers, than a hundred *Joanna Bridge*? Who would give one fragrant *Laurent Carle* for ten *Gruss an Teplitz*? Every time one sees a plant of *Red-Letter Day* he is disappointed that he cannot cut the flowers. *Gruss an Teplitz* is by all tests the best decorative Hybrid Tea for hedges or a display of color, and what applies to it applies with even more force to the rest of the decorative class. They are good in their place!

The fewer the number of roses to be planted, the more carefully should they be selected. Long-stemmed varieties of fine form, with lasting qualities and perfume, are the cutting requisites.

Most red roses give wonderful perfume, and many pinks are delightfully scented; light-colored kinds usually lack fragrance, *Ophelia* being a noted exception. The yellows are not as pleasingly fragrant as those mentioned, their odor being of a spicy character. This is particularly true of the Hybrid Teas and *Pernetianas*, but some yellow Teas have a very pleasing perfume.

CHAPTER II

CLIMATIC CONDITIONS AFFECTING CLIMBING ROSES

NEARLY the same rules apply to this class as to the dwarfs, though, probably, balling and fading of the flowers count for less, because climbers are mostly used for garden decoration. Growth and foliage, on the other hand, are more important as they are more apparent.

In the Northern and Central Zones entire hardiness is required.

Except in a cool, moist coastal climate, the hardy climbers seldom give a second bloom anywhere. Thus, Long Island and the coastal region of New England in the East, and, more especially northern California, Washington, and Oregon in the West, secure results with hardy climbers not obtainable further inland.

The choice of climbing roses for the North is confined to a small list in which absolute hardiness is the first requisite, for the winter-killing of the canes above ground destroys the blooming wood of the rose, making it wholly flowerless. A dwarf rose

gives bloom not only on wood of the preceding year, but its best bloom is furnished on wood of the current year, whereas, on most hardy climbers, no bloom is borne on current-year wood, all of it appearing on canes of former years, and the best bloom being often produced on the new shoots of the previous season.

In the Central Zone, by the same token, hardiness is also of more importance than for dwarfs, but in this section roses susceptible to frost further north may be grown, and therefore the choice of varieties is greater.

The best of the Wichuraianas and the hardiest of the Climbing Teas, Climbing Hybrid Teas, and a few others, provide a fine assortment to choose from.

South of Washington, D. C., in the Southeastern Zone, the possibility in climbers is greater still, and the hardier varieties necessarily used further north, which do not compare in beauty or length of blooming season with the more tender kinds, are not essential, although they may be used. In this section the same rules which apply to dwarfs apply to climbers, with a premium on varieties which retain foliage.

The Pacific Northwestern Zone may grow almost anything in climbers, except the most

tender Climbing Teas, Noisettes, and the Cherokee; even these may be tried, provided the grower is willing to give winter protection and to experience occasional loss from frost. The other characteristics required are the same as for dwarfs.

In the southwestern seacoast section is found the best situation for climbers. It is merely a case of choosing those which one likes, with due regard to mildew and loss of foliage, balling and fading depending on nearness to ocean influence. The wonderful tender climbers of southern France are in their glory here; no other zone can compare with this for everblooming climbers. It is remarkable how Teas and Noisettes flourish with apparently no care and no season of rest. The great trouble is that under such conditions the growth becomes crowded; otherwise, they thrive and produce blooms throughout nearly the entire year.

It is, however, in this favored zone, most important to select climbers which do not mildew. It is also necessary, for the best results, to choose roses of medium petalage, with the exception of Teas. Thin varieties open here too quickly in summer, if in sunny locations, and roses which ball are disappointing in winter, although planted in the sun. All the Noisettes, and the Polyantha, Climbing Cécile Brunner, are incomparable.

Texas and like regions in the Interior Southern Zone require the same virtues necessary for dwarf varieties, the holding of foliage being as important as in the Southwest.

In all these sections, a great deal may be done by diligent care and protection from the sectional extremes of cold, heat, dampness, and wind, and by selecting the best situation for the more tender varieties.

In practically all zones, except the Interior Southern, or in locations with altitude in the Central Zone, where they may be grown, the Hybrid Tea climbers will be found to mildew, often badly. Their blooms are so beautiful, however, that they are well worth cultivating. In moist climates, every one of them should be given a sunny, ventilated location and be watched most carefully for mildew, preventive measures being taken immediately upon its appearance.

While these roses are most beautiful, they are, perhaps, the most disappointing of any type in the Central Zone, and this has also been found true in published reports, not only in the English Rose Annual, but by observations of them in Europe and by information received regarding them from Australia. There are, indeed, very few valuable Climbing Hybrid Tea roses. Some varieties tend to

revert to the dwarf from which they originated or else are shy in bloom.

As in dwarfs, each district overlaps regarding hardiness. It will be found that descriptions of roses as grown in England and France do not apply in this country, and this is especially noticeable in reports of hardiness in climbers.

In the mountainous regions of California, the climate is extremely cold in winter, and it has been found that it requires the hardiest climbers to survive at an altitude exceeding 4,000 feet. Under 4,000 feet, with careful protection, Climbing Cécile Brunner, William Allen Richardson, and Fortune's Double Yellow have been successfully grown where the extreme in winter is nearly zero. In one particular case, the roses were surrounded by buildings in a secluded courtyard, and thereby protected from all high winds. Maréchal Niel has been grown in the State of Washington with careful protection. The more tender climbers should always be given the preference of location. Northern exposure will naturally be found to be more trying on roses susceptible to mildew. In planting a climbing rose next to a wall, always use a trellis or some means of giving the plant air-space between it and the wall.

CHAPTER III

THE NORTHERN ZONE

THE climatic conditions, as explained in the two preceding chapters, and the necessary rose characteristics are summarized for quick reference in a table for each zone in each chapter, followed by a list of recommended roses.

In using the Northern Zone list, it should be noted that conditions vary with changes of altitude and the resulting humidity or lack of moisture over the areas of this zone, including the Interior North.

Some sections of the Middle West have cold winters and exceedingly hot summers, in which districts Hybrid Perpetuals and Hybrid Teas of full petalage are the best roses for cut flowers.

The descriptions of roses recommended should be carefully read before they are ordered. The varieties selected for these lists were chosen after all available information had been most carefully checked. The aim has been to include the most dependable kinds, with the widest color-range.

Roses for cutting are placed in order of personal preference for general conditions in each zone.



PLATE V. Roses as affected by adverse climates

1. Clotilde Soupert, Cl. Poly., balls near seacoast; splendid in dry heat.
2. Red Radiance, HT., in heat; stem and neck good; does not open too rapidly; form sometimes very loose; color holds well.
3. Duchess of Wellington, HT., in heat. Note very weak and wilted neck; open center; color also fades quickly.
4. Lulu, HT., in heat, showing very long bud. opens quickly and fades; decorative only.

CLIMATIC CONDITIONS AND ROSE CHARACTERISTICS
FOR THE NORTHERN ZONE

Thermometer well below zero for long periods requires extreme hardness.

In little continued heat: Thin roses with petals of heavy substance last well; roses which ordinarily open too quickly open more slowly; loss of size, bluing, and fading do not occur as frequently; perfume develops well.

Short growing season: Strong growers give best results; loss of foliage not important; black-spot bad, but less noticeable in short season.

Rain throughout season, except in interior of high altitudes where high winds prevail; damp ocean winds and fog near coast: Balling bad; protection from high winds advisable; mildew very bad.

Where dampness and dryness vary: In the interior of high altitudes, with resulting lack of humidity, mildew and balling seldom occur, and roses with good petalage do best.

ABBREVIATIONS

For convenience, a collected list is here presented of the Abbreviations used in the work. The nomenclature follows that in "Standardized Plant Names."

A.	Alba.	H.Sb.	Hybrid Sweetbrier.
AB.	Austrian Brier.	HT.	Hybrid Tea.
Bour.	Bourbon.	HW.	Hybrid Wichuraiana.
C.	China.	Læv.	Lævigata.
Cent.	Centifolia.	Lam.	Lambertiana.
Cl.	Climbing.	M.	Moss.
D.Poly.	Dwarf Polyantha.	Mult.	Multiflora.
H.AB.	Hybrid Austrian Brier (Per- netiana).	Nois.	Noisette.
H.Brac.	Hybrid Bracteata.	Per.	See Hybrid Austrian Brier.
H.China	Hybrid China.	Poly.	Polyantha.
H.Gig.	Hybrid Gigantea.	Prov.	Provence.
H.Mult.	Hybrid Multiflora.	Rug.	Rugosa.
H.Musk	Hybrid Musk.	Set.	Setigera.
HP.	Hybrid Perpetual.	Sp.	Species.
HRug.	Hybrid Rugosa.	T.	Tea
		W.	Wichuraiana.

30 ROSES FOR ALL AMERICAN CLIMATES

"CUTTING" ROSES FOR THE NORTHERN ZONE

Numerals denote degrees of hardiness: (1) perfect, (2) good, (3) not dependable. An asterisk (*) preceding a variety signifies it to be of the most constant and pleasing fragrance characteristic of each particular color.

The descriptions of the roses given in the following lists will be found in the chapters on the various classes, and it should be noted that where there is not a chapter on a particular class, such rose will be found in the chapter on "Additional Classes."

Red

- Boieldieu HP. (1)
 *Anna de Diesbach . . HP. (1)
 *Hugh Dickson HP. (2)
 *Gloire de Chédane-
 Guinoisseau HP. (2)
 J. B. Clark HP. (2)
 *Paul Neyron HP. (1)
 *General Jacqueminot . HP. (2)

Yellow

- Candeur Lyonnaise . HP. (2)
 Dolly Varden H.Rug. (3)
 Mrs. Aaron Ward . . HT. (3)
 Mme. Ravary HT. (3)
 Harry Kirk T. (3)
 Daniel Lesueur . . . H.Rug. (3)
 Eugene Barbier . . . HP.
 (For test.)

Pink

- *Baronne Prévost . . . HP. (1)
 François Michelin . . HP. (1)
 Baroness Rothschild . HP. (2)
 *Mrs. John Laing . . . HP. (2)
 Magna Charta HP. (2)
 Lady Ursula HT. (3)
 Lady Ashtown HT. (3)

Light

- Caroline de Sansal . . HP. (1)
 Frau Karl Druschki . HP. (2)
 *Mme. Gabriel Luizet . HP. (2)
 Merveille de Lyon . . HP. (2)
 Gloire Lyonnaise . . . HP. (2)
 *Ophelia HT. (3)
 La Tosca HT. (3)

ROSES FOR GARDEN DECORATION IN THE NORTHERN ZONE

Red

- Ecarlate HT. (2)
 Gruss an Teplitz . . . HT. (2)
 Rosa gallica Sp. (1)

Yellow

- Austrian Copper . . . AB. (1)
 Austrian Yellow . . . AB. (1)
 Harison's Yellow . . . AB. (1)
 Rosa Hugonis Sp. (1)
 Persian Yellow AB. (1)

Pink

- Belle Poitevine . . . H.Rug. (2)
 Cabbage Cent. (1)
 Rosa acicularis . . . Sp. (1)
 Salet M. (2)

Light

- Rosa altaica Sp. (1)
 Old Blush C. (1)
 Mme. Plantier A. (1)

SMALL EVERBLOOMING POLYANTHA ROSES FOR BORDERS
IN THE NORTHERN ZONE*Red*

Ænnchen Müller (2)
 Erna Teschendorff (2)
 Jessie. (Interior North) . . (2)
 F. J. Grootendorst, H.Rug. (1)
 (Use for tall borders.)

Pink

Echo (2)
 Mrs. W. H. Cutbush . . . (2)

Yellow

George Elger (2)
 Mieze (2)

White

Katharina Zeimet (2)
 Marie Pavic (2)
 Yvonne Rabier (2)

ROSES FOR HEDGES AND MASSING IN THE
NORTHERN ZONE*Red*

Agnes Emily Carman H.Rug. (1)
 F. J. Grootendorst . H.Rug. (1)
 Rosa rugosa rubra . Rug. (1)

Pink

Robert Huey . . . HT. (2)
 Rosa rugosa repens
 rosea Rug. (1)

Yellow

Agnes H.Rug. (1)
 Rosa Hugonis . . . Sp. (1)
 Persian Yellow . . . AB. (1)

Light

Rosa rubiginosa . . . Sp. (1)
 Rosa rugosa alba . . . Rug. (1)

CLIMBING ROSES FOR THE NORTHERN ZONE

Red

Baronesse van Ittersum H.Mult. (2)
 Cl. American Beauty HW. (3)
 Crimson Rambler . H.Mult. (1)
 (Interior.)
 Gem of Prairies . . . Set. (2)
 Hiawatha HW. (2)
 Beauty of the Prairies Set. (1)
 Ruby Queen . . . HW. (2)

Yellow

Goldfinch H.Mult. (2)
 Prof. C. S. Sargent . HW. (2)
 (Also Austrian Briers mentioned
 in Garden Decoration sorts.)

Pink

American Pillar . . HW. (2)
 Anna-Marie de Mont-
 ravel Set. (2)
 Dawson H.Mult. (2)
 Evangeline HW. (1)
 Rosa setigera (Prai-
 rie Rose) Sp. (1)
 Tausendschön . . . H.Mult. (1)
 Veilchenblau . . . H.Mult. (1)

Light

Baltimore Belle . . Set. (2)
 Rosa Wichuraiana . Sp. (1)
 Sanders' White . . HW. (2)
 White Tausendschön H.Mult. (1)

CHAPTER IV

THE CENTRAL ZONE

IN ADDITION to the roses listed for this zone, all the hardy varieties grown in the Northern Zone are adaptable, their main fault being lack of continued blooms. (This applies most especially to climbers.)

Roses noted for the more southern zones may be grown in the Central Zone with most careful protection, but such are better for large collections and experiments rather than for general use. It is the plain purpose of this book to propose dependable varieties, experiments being undertaken knowingly as such.

As noted in previous chapters, this zone includes mountainous districts in other locations, particularly with regard to the hardiness of roses used.

CLIMATIC CONDITIONS AND ROSE CHARACTERISTICS FOR THE CENTRAL ZONE

Thermometer seldom below zero, 10° to 20° above zero average minimum: Requires great hardiness.

Long periods of heat: Thin roses with heavy substance last only in spring and fall; roses which open quickly do

not last well; loss of size, bluing, and fading become faults, except early and late; perfume does not last in midsummer.

Medium growing season: Medium growers give good results; loss of foliage becomes important.

Rain throughout season except in interior with altitude; damp ocean winds and fog near coast: Balling bad; mildew bad; black-spot bad on account of heat and humidity.

Where dampness and dryness vary: In the interior with altitude, mildew and balling are not pronounced, and roses with full petalage give best results.

"CUTTING" ROSES FOR THE CENTRAL ZONE

Numerals denote degrees of hardiness: (1) perfect, (2) good, (3) not dependable. An asterisk (*) preceding a variety signifies it to be of the most constant and pleasing fragrance characteristic of each particular color.

The descriptions of the roses given in the following lists will be found in the chapters on the various classes, and it should be noted that where there is not a chapter on a particular class, such rose will be found in the chapter on "Additional Classes."

Red

- *Red Radiance HT. (1)
- Robin Hood HT. (1)
- *Hoosier Beauty . . . HT. (2)
- H. V. Machin HP. (1)
- Jonkheer J. L. Mock . HT. (1)
- (Except near coast.)
- *Hadley HT. (3)
- *Bloomfield Progress . HT. (3)
- (Last two in southern parts.)

Pink

- *Rose Marie HT. (1)
- *Radiance HT. (1)
- Mme. Segond Weber . HT. (1)
- Los Angeles HT. (2)
- Lady Alice Stanley . . HT. (1)
- Mrs. W. C. Egan . . . HT. (1)
- Mrs. Henry Morse . . . HT. (1)

Yellow

- *Mrs. Dunlop-Best . . HT. (1)
- Souv. de Claudius Per-
- net H.AB. (Per.) (2)
- Souv. de H. A. Ver-
- schuren HT. (1)
- Elli Hartmann HT. (1)
- William F. Dreer . . . HT. (1)
- Duchess of Wellington HT. (1)

Light

- *Ophelia HT. (1)
- Mme. Jules Bouché . HT. (1)
- (Except near coast.)
- Lady Plymouth T. (1)
- Mrs. Harold Brockle-
- bank HT. (2)
- Mrs. Charles Lam-
- plough HT. (1)
- *Josephine Thomas . . HT.
- (Not tested for hardiness.)

34 ROSES FOR ALL AMERICAN CLIMATES

ROSES FOR GARDEN DECORATION IN THE CENTRAL ZONE

<i>Red</i>	<i>Yellow</i>
Cl. Mme. Jules Gro- lez. (Pillar.) . . . Cl.HT. (3)	Chrissie Mackellar . . . HT. (2)
Gruss an Teplitz . . . HT. (1)	Lady Pirrie HT. (1)
Red-Letter Day . . . HT. (2)	Old-Gold HT. (1)
<i>Pink</i>	<i>Light</i>
Bloomfield Abundance . HT. (1)	Bloomfield Perpetual . HT. (1)
(Southern parts.)	W. Freeland Kendrick . HT. (1)
Lady Ursula HT. (1)	

SMALL EVERBLOOMING POLYANTHA ROSES FOR BORDERS IN THE CENTRAL ZONE

<i>Red</i>	<i>Yellow</i>
Ænnchen Müller (1)	George Elger (1)
Eblouissant (1)	Mieze (1)
Joseph Guy (Lafayette) . . (1)	
<i>Pink</i>	<i>Light</i>
Louise Walter (1)	Gruss an Aachen (1)
Maman Turbat (1)	Marie Pavic (1)
	Tip-Top (1)

ROSES FOR HEDGES AND MASSING IN THE CENTRAL ZONE

<i>Red</i>	<i>Yellow</i>
AgnesEmilyCarmanH.Rug. (1)	Lady Penzance . . . H.Sb. (1)
Rosa rugosa atro- purpurea H.Rug. (1)	Agnes H.Rug. (1)
Cl. Orleans Cl.Poly. (2)	Mermaid H.Brac.(2)
(Hedges, supported.)	
F. J. Grootendorst . H.Rug. (1)	
(Hedges.)	
<i>Pink</i>	<i>Light</i>
Clytemnestra H.Musk.(2)	Blanc Double de Coubert H.Rug. (1)
Conrad Ferdinand	Lord Penzance . . . H.Sb. (1)
Meyer H.Rug. (1)	

CLIMBING ROSES FOR THE CENTRAL ZONE

Numerals denote degrees of hardiness: (1) perfect, (2) good, (3) not dependable.

Red

Ards Rover	Cl. HP. (2)
Bess Lovett	HW. (1)
Cl. Gruss an Teplitz .	Cl. HT. (2)
(Except near coast.)	
Dr. Huey	HW. (2)
Excelsa	HW. (1)
Paul's Scarlet Cl. .	HW. (1)
Reine Marie Henri-	
ette.	Cl. T. (2)

Pink

Christine Wright .	HW. (1)
Dorothy Perkins .	HW. (1)
Evangeline	HW. (1)
Gerbe Rose	HW. (1)
Gloire de Dijon . .	Cl. T. (3)
Mrs. George C.	
Thomas	Cl. HT. (2)
Cl. Mrs. W. J. Grant	Cl. HT. (3)
(Last three in southern parts.)	
Schiller	Lam. (1)
Zephirine Drouhin .	H. Bour. (2)
(Seacoast.)	

Yellow

Albéric Barbier . . .	HW. (1)
Aviateur Blériot . .	HW. (2)
Belle Lyonnaise . . .	Cl. T. (3)
(Southern parts with heavy protection.)	
Emily Gray	HW. (2)
Gardenia	HW. (1)
William Allen Rich-	
ardson	Nois. (3)
(Southern parts with heavy protection.)	

Light

Alida Lovett	HW. (2)
Cl. Kaiserin Au-	
guste Viktoria . .	Cl. HT. (3)
Cl. Ophelia	Cl. HT. (3)
(Last two in southern parts, with heavy protection.)	
Danæ	H. Musk (2)
Dr. W. Van Fleet .	HW. (1)
Mary Lovett	HW. (2)
Silver Moon	HW. (2)

CHAPTER V

THE SOUTHEASTERN ZONE

IT WOULD not be advisable, unless for some special reason, to use climbers listed in the North for this zone, but those given for the Central Zone are valuable. An exception in the northern list is American Pillar, which received a heavy vote for this section in the American Rose Annual referendum of 1923, although having but one short period of bloom.

For exhibition, it would be well to cultivate the exhibition kinds among the Hybrid Teas, realizing that such would be at their best for a short season.

In the mountainous parts of the Southeastern Zone, the list of roses for the Central Zone must be considered on account of hardiness.

CLIMATIC CONDITIONS AND ROSE CHARACTERISTICS FOR THE SOUTHEASTERN ZONE

Thermometer seldom below 20° above zero, and then only for short periods: Makes hardiness of little moment.

Very long periods of heat: Thin roses and those which open quickly only valuable for a very short season; loss of size, bluing and fading become increasingly objectionable; perfume lost in heated periods in all but exceptional cases.

Long growing season: Small growers in Northern and Central Zones give good results here; loss of foliage a serious fault; black-spot very bad in moist heat and long growing season.

Rain scattered through summer; dampness near coast; generally humid: Mildew bad; balling bad only in roses of extremely heavy petalage, with thin substance in spring and fall.

"CUTTING" ROSES FOR THE SOUTHEASTERN ZONE

The first numerals apply to foliage retention: (1) perfect, (2) good, (3) lost early. Second numerals apply to mildew: (1) practically none, (2) slight, (3) susceptible. An asterisk (*) preceding a variety signifies it to be of the most constant and pleasing fragrance characteristic of each particular color.

The descriptions of the roses given in the following lists will be found in the chapters on the various classes, and it should be noted that where there is not a chapter on a particular class, such rose will be found in the chapter on "Additional Classes."

Red

- Red Radiance . . HT. (2)-(2)
- *Laurent Carle . . HT. (3)-(1)
- *Hadley HT. (2)-(2)
- *Etoile de France . HT. (2)-(2)
- Jonkheer J. L. Mock HT. (3)-(2)
- Rhea Reid HT. (2)-(2)
- Red Cochet T. (1)-(1)

Pink

- *Rose Marie . . . HT. (2)-(1)
- Maman Cochet . . T. (1)-(1)
- *Radiance HT. (2)-(2)
- President Taft . . HT. (2)-(2)
- Mme. Abel Chatenay HT. (2)-(3)
- Bridesmaid T. (1)-(2)

Yellow

- Mme. Charles Lautaud HT. (2)-(1)
- Sunburst HT. (2)-(2)
- Souv. de Claudius Pernet . H.A.B. (Per.) (2)-(2)
- Souv. de Pierre Notting T. (1)-(1)
- Mme. Jenny Gilemot HT. (2)-(2)
- Sunset T. (1)-(2)

Light

- White Maman Cochet T. (1)-(1)
- Frau Karl Druschki HP. (3)-(3)
- Kaiserin Auguste Viktoria HT. (2)-(1)
- *Josephine Thomas HT. (2)-(1)
- Lady Plymouth . T. (1)-(2)
- William R. Smith . T. (1)-(1)

38 ROSES FOR ALL AMERICAN CLIMATES

ROSES FOR GARDEN DECORATION IN THE SOUTHEASTERN ZONE

<i>Red</i>		<i>Yellow</i>	
Louis Philippe . C.	(1)-(2)	Etoile de Lyon . . . T.	(1)-(2)
Mme. Rathswell T.	(1)-(1)	Golden Oriole . . . T.	(1)-(1)
Noëlla Nabon-		Lady Hillingdon . T.	(1)-(2)
nand Cl.T.	(2)-(3)	(In shade.)	
		Mrs. Frank Bray . HT.	(2)-(3)
<i>Pink</i>		<i>Light</i>	
Catherine Mermet . T.	(1)-(2)	Isabella Sprunt . . T.	(1)-(2)
Duchesse de Brabant T.	(1)-(2)	Marie Van Houtte . T.	(1)-(2)
Mme. Lambard . . T.	(1)-(2)	(Except near coast.)	

SMALL EVERBLOOMING POLYANTHA ROSES FOR BORDERS IN THE SOUTHEASTERN ZONE

Foliage well retained; little mildew.

<i>Red</i>		<i>Yellow</i>	
Eblouissant		Eugenie Lamesch	
Leonie Lamesch		George Elger	
<i>Pink</i>		<i>Light</i>	
Cécile Brunner		Tip-Top	
Orleans		White Cécile Brunner	

ROSES FOR HEDGES AND MASSING IN THE SOUTHEASTERN ZONE

Numerals apply to foliage retention.

<i>Red</i>		<i>Yellow</i>	
Gruss an Teplitz . . . HT.	(2)	Rêve d'Or	Nois. (1)
Red Cherokee Læv.	(1)	Solfatare	Nois. (1)
<i>Pink</i>		<i>Light</i>	
Gloire de Dijon . . . Cl.T.	(1)	Lamarque	Nois. (1)
Pink Cherokee Læv.	(1)	White Cherokee . . . Læv.	(1)

CLIMBING ROSES FOR THE SOUTHEASTERN ZONE

Numerals apply to foliage retention: (1) perfect, (2) good, (3) lost early.

Red

Cl. Agrippina (Cl. Cramoisi Superi- eur)	Cl.Bour.(2)
Cl. Chateau de Clos Vougeot	Cl.HT. (3)
Cl. Helen Gould (Cl. Balduin)	Cl.HT. (2)
Cl. Laurent Carle	Cl.HT. (2)
Cl. Papa Gontier	Cl.T. (1)
Cl. Souvenir of Wootton	Cl.HT. (2)
Fellemborg	Cl.C. (2)

Pink

Bloomfield Decora- tion	HW. (1)
Cl. Bridesmaid	Cl.T. (1)
Cl. Cécile Brunner	Cl.Poly. (1)
Cl. Maman Cochet	Cl.T. (1)
Cl. Mme. Abel Chatenay	Cl.HT. (2)
Zephirine Drouhin	H.Bour. (1)

Yellow

Cl. Perle des Jardins	Cl.T. (1)
Cl. Sunburst	Cl.HT. (2)
Duchesse d'Auer- staedt	Nois. (1)
Rêve d'Or	Nois. (1)
William Allen Rich- ardson	Nois. (1)
Yellow Banksia	Sp. (1)

Light

Cl. Devoniensis	Cl.T. (1)
Cl. Kaiserin Auguste Viktoria	Cl.HT. (2)
Cl. White Maman Cochet	Cl.T. (1)
Mme. Alfred Car- rière	H.Nois. (1)
Mrs. Charles Gers- dorff	Cl.HT. (2)
White Banksia	Sp. (1)

CHAPTER VI

THE PACIFIC NORTHWESTERN ZONE

AS ALREADY explained, this district does not include the Interior Pacific Northwest, for which the Northern and Central Zones will supply the list of varieties, the frost-extremes being the guide.

The coastal belt, which is considered as the Pacific Northwest in this section, is tempered as to cold extremes by its nearness to the ocean and by its lack of altitude, and this entire region does best with roses of medium petalage.

As noted before, it is easier to exclude good varieties in this zone than to include poor sorts.

CLIMATIC CONDITIONS AND ROSE CHARACTERISTICS FOR THE PACIFIC NORTHWESTERN ZONE

Zero conditions seldom occur; 10° to 20° above zero average minimum: Fair to good hardiness; protection gives fine results with tender classes.

Scattered periods of heat and dryness: Thin roses, even with poor substance elsewhere, give good results here; roses do not open as quickly as in other zones; loss of size, bluing and fading seldom occur.

Long growing season, usually equable: Small growers give

good results; medium growers attain remarkable size; loss of foliage helped by equable conditions over the long season.

Rain early and late; summer almost rainless; dampness near coast and in bay districts: Mildew bad; balling bad; the ideal rose is one with medium petalage which opens readily; black-spot bad, but not as prevalent as in moist heat.

"CUTTING" ROSES FOR THE PACIFIC NORTHWESTERN ZONE

An asterisk (*) preceding a variety signifies it to be of the most constant and pleasing fragrance characteristic of each particular color.

The descriptions of the roses given in the following lists will be found in the chapters on the various classes, and it should be noted that where there is not a chapter on a particular class, such rose will be found in the chapter on "Additional Classes."

Red

*General MacArthur . . .	HT.
*Hadley	HT.
*Hoosier Beauty	HT.
*Hugh Dickson	HP.
J. B. Clark	HP.
Augustus Hartmann . .	HT.

Pink

Mme. Caroline Testout .	HT.
*Rose Marie	HT.
Los Angeles	HT.
*Columbia	HT.
*Mrs. John Laing	HP.
Mrs. Henry Morse . . .	HT.

Yellow

Duchess of Wellington .	HT.
Golden Emblem . H.AB.	(Per.)
*Mrs. Dunlop-Best . . .	HT.
Lady Roberts	T.
Mme. Mélanie Soupert .	HT.
Mme. Ravary	HT.
Souv. de Claudius Pernet	
	H.AB. (Per.)

Light

Frau Karl Druschki . . .	HP.
*Ophelia	HT.
Florence Pemberton . .	HT.
Grange Colombe	HT.
Mrs. Foley-Hobbs . . .	T.
Harry Kirk	T.

ROSES FOR GARDEN DECORATION IN THE PACIFIC NORTHWESTERN ZONE

Red

Hawthorn Crimson . . .	HT.
Waltham Scarlet	HT.

Pink

Bloomfield Abundance . .	HT.
Irish Elegance	HT.

Yellow

Comtesse du Cayla . . .	C.
Lady Hillingdon	T.

Light

Pharisäer	HT.
W. Freeland Kendrick . .	HT.

42 ROSES FOR ALL AMERICAN CLIMATES

SMALL EVERBLOOMING POLYANTHA ROSES FOR BORDERS IN THE PACIFIC NORTHWESTERN ZONE

Red

Leonie Lamesch
Miss Edith Cavell

Pink

Cécile Brunner
Mrs. W. H. Cutbush

Yellow

George Elger
Perle d'Or

Light

Gruss an Aachen
Tip-Top

ROSES FOR HEDGES AND MASSING IN THE PACIFIC NORTHWESTERN ZONE

Red

Gruss an Teplitz . . . HT.
Rosa Moyesii . . . Sp.

Pink

Clytemnestra . . . H.Musk.
Zephirine Drouhin . . Bour.

Yellow

Mermaid H.Brac.
Rosa xanthina Sp.

Light

Danæe H.Musk.
Rosa macrantha . . . Sp.

CLIMBING ROSES FOR THE PACIFIC NORTHWESTERN ZONE

The climbing roses recommended for the Central Zone may also be used if desired.

Red

Cl. Chateau de Clos
Vougeot Cl.HT.
Cl. General MacArthur Cl.HT.
Cl. Hoosier Beauty . . Cl.HT.
Cl. H. V. Machin . . . Cl.HP.
Cl. Mme. Jules Grolez Cl.HT.
Cl. Richmond Cl.HT.

Pink

Bloomfield Decoration HW.
Cl. Mme. Caroline Test-
out Cl.HT.
Cl. Cécile Brunner . . Cl.Poly.
Cl. Lady Ashtown . . . Cl.HT.
Cl. Winnie Davis . . . Cl.HT.
Mrs. George C. Thomas Cl.HT.

Yellow

Alister Stella Gray . . Nois.
Cl. Lady Hillingdon . Cl.T.
Cl. Lady Pirrie . . . Cl.HT
Cl. Sunburst Cl.HT
Rêve d'Or Nois.
William Allen Rich-
ardson Nois.

Light

Cascadia H.Musk.
Cl. Ophelia Cl.HT.
Cl. Kaiserin Auguste
Viktoria Cl.HT.
Mme. Alfred Carrière . H. Nois.

CHAPTER VII

THE PACIFIC SOUTHWESTERN ZONE

THIS zone is more of a contradiction than any other, for, outside of the fact that hardness is of little moment, other varying conditions require entirely opposite rose characteristics at different seasons. A rose which in winter and early spring balls badly is very fine in heated periods, in the late summer and early fall, after the trade winds cease to bring dampness; while, on the other hand, a variety which opens too quickly, fades or blues in heated periods, is splendid in the winter, spring, and early summer while the sea winds continue to give coolness.

The rosarian must have either a very few kinds which are most adapted to all conditions, or else more roses divided into sorts best suited to dampness during the damp season and heat during the late summer and early fall.

This section differs from the Interior South. It includes only a narrow belt along the coast from Mexico to northern California, increasing in dampness and coolness as one goes north.

44 ROSES FOR ALL AMERICAN CLIMATES

CLIMATIC CONDITIONS AND ROSE CHARACTERISTICS FOR THE PACIFIC SOUTHWESTERN ZONE

Temperature very seldom below 25° above zero; in favored locations seldom below 30° above. Hardiness of no moment.

Scattered periods of great heat and dryness; long periods of reasonable heat: Thin roses and those which open quickly are objectionable from July to October; loss of size, bluing and fading very serious faults except in winter; perfume very good except in scattered periods of extreme heat.

Extremely long growing season: Small growers give wonderful results; loss of foliage a most serious fault.

No rain in summer, but cold, damp ocean winds and fog at night: Mildew very bad; balling very bad; black-spot very bad, on account of hot, moist conditions; Teas seem to resist better than other kinds.

Extreme heat brings dry conditions and scorching winds: Roses are scorched under extreme heat.

"CUTTING" ROSES FOR THE PACIFIC SOUTHWESTERN ZONE

First numeral applies to foliage retention: (1) Very good, (2) good, (3) lost early. Second numeral applies to degrees of mildew: (1) Practically none, (2) slight, (3) susceptible. An asterisk (*) preceding a variety signifies it to be of the most constant and pleasing fragrance characteristic of each particular color.

The descriptions of the roses given in the following lists will be found in the chapters on the various classes, and it should be noted that where there is not a chapter on a particular class, such rose will be found in the chapter on "Additional Classes."

Red

*Hadley	HT. (2)-(2)
*Hoosier Beauty . .	HT. (2)-(3)
Red Radiance . .	HT. (2)-(2)
*Laurent Carle . .	HT. (2)-(1)
*Edward Mawley .	HT. (1)-(1)
Red Cochet . . .	T. (1)-(1)

Yellow

Mme. Charles Lu-	
taud	HT. (2)-(1)
Senateur Mascu-	
aud	HT. (2)-(2)
Sunburst	HT. (2)-(2)
Souv. de Claudius	
Pernet . H.AB. (Per.)	(3)-(2)
Golden Em-	
blem . H.AB. (Per.)	(3)-(2)
Souv. de Pierre	
Notting	T. (1)-(1)

"CUTTING" ROSES FOR THE PACIFIC SOUTHWESTERN ZONE, continued

Pink

- *Rose Marie . . . HT. (2)-(1)
 Los Angeles . . . HT. (3)-(2)
 Maman Cochet . . T. (1)-(1)
 *Radiance . . . HT. (2)-(2)
 Mme. Segond Weber HT. (2)-(2)
 Clara Watson . . HT. (2)-(2)

Light

- Frau Karl Druschki HP. (3)-(3)
 White Maman Cochet . . . T. (1)-(1)
 Kaiserin Auguste Viktoria . . . HT. (2)-(1)
 *Josephine Thomas HT. (2)-(1)
 Comtesse de Casagne . . . HT. (2)-(3)
 Lady Plymouth . T. (1)-(2)

ROSES FOR GARDEN DECORATION IN THE PACIFIC SOUTHWESTERN ZONE

Red

- General MacArthur HT. (2)-(3)
 K. of K. . . . HT. (2)-(2)
 Louis Philippe . . C. (1)-(2)
 Mme. Rathswell . . T. (1)-(1)

Yellow

- Golden Oriole . . . T. (1)-(1)
 Irish Fireflame . . HT. (2)-(2)
 (In shade.)
 Mme. Jean Dupuy . T. (1)-(2)

Pink

- Catherine Mermet . T. (1)-(2)
 Duchesse de Brabant T. (1)-(2)

Light

- Isabella Sprunt . . T. (1)-(2)
 Mrs. Frank Bray . HT. (1)-(2)

SMALL EVERBLOOMING POLYANTHA ROSES FOR BORDERS
IN THE PACIFIC SOUTHWESTERN ZONE

Foliage well retained; little mildew.

Red

- Leonie Lamesch
 Perle des Rouges

Yellow

- Eugenie Lamesch
 George Elger

Pink

- Chatillon Rose
 Cécile Brunner

Light

- Tip-Top
 White Cécile Brunner

46 ROSES FOR ALL AMERICAN CLIMATES

ROSES FOR HEDGES AND MASSING IN THE PACIFIC SOUTHWESTERN ZONE

First numeral applies to foliage retention: (1) Very good (2) good, (3) lost early. Second numeral applies to degrees of mildew: (1) Practically none, (2) slight, (3) susceptible.

Red

Gloire des Rosomanes . . HC.
Gruss an Teplitz . . . HT.
Red Cherokee . . . Læv.
(Needs support.)

Pink

Gloire de Dijon . . . Cl.T.
Pink Cherokee . . . Læv.
(Needs support.)

Yellow

Lady Hillingdon . . . T.
Rêve d'Or . . . Nois.
(In sun.)

Light

Frau Karl Druschki . . . HP.
(In sun.)
Lamarque . . . Nois.
White Cherokee . . . Læv.
(Needs support.)

CLIMBING ROSES FOR THE PACIFIC SOUTHWESTERN ZONE

Red

Cl. General Mac-
Arthur . . . Cl.HT. (2)-(3)
Cl. Hoosier
Beauty . . . Cl.HT. (2)-(3)
Cl. H.V. Machin Cl.HT. (2)-(3)
Cl. Papa Gontier Cl.T. (1)-(2)
François Crousse Cl.T. (1)-(2)
Winter Cheer . H.Musk. (1)-(2)

Pink

Belle of Portugal H.Gig. (2)-(3)
Bloomfield Deco-
ration . . . HW. (1)-(2)
Cl. Mme. Caro-
line Testout . Cl.HT. (2)-(3)
Cl. Cécile
Brunner . . . Cl.Poly. (1)-(1)
Cl. Maman
Cochet . . . Cl.T. (1)-(1)
Cl. Winnie Davis Cl.HT. (2)-(2)

Yellow

Cl. Sunburst . . Cl.HT. (2)-(2)
Cl. Yellow Cécile
Brunner . . . Cl.Poly. (1)-(1)
Duchesse d'Auer-
staedt . . . Nois. (2)-(2)
Rêve d'Or . . . Nois. (2)-(2)
William Allen
Richardson . Nois. (2)-(2)
Yellow Banksia Sp. (1)-(1)

Light

Cl. Kaiserin Au-
guste Viktoria . Cl.HT. (2)-(1)
Cl. White Maman
Cochet . . . Cl.T. (1)-(1)
Mme. Alfred Car-
rière . . . H.Nois. (2)-(3)
White Banksia . Sp. (1)-(1)

CHAPTER VIII

THE INTERIOR SOUTHERN ZONE

THE frost conditions of these areas vary with latitude and altitude, and the hardiness needed sometimes closely approaches the requirements for the Central Zone.

In certain low mountain regions of the Interior Eastern South there is much more dampness than obtains in the more arid districts further inland where there is more altitude, and in such locations frosts after early forced growth are even more dangerous than in the remainder of the zone.

In situations in the extreme southern part of the interior, where there is little frost, the best of the tender roses, with full petalage, thrive better than in the Southwest and Southeast, Maréchal Niel being the most notable illustration of this. Roses with full petalage are best in this zone.

CLIMATIC CONDITIONS AND ROSE CHARACTERISTICS FOR THE INTERIOR SOUTHERN ZONE

Temperature varies in cold extremes; 10° above zero usual minimum; 20° a low average: Reasonable hardiness, with special hardiness required for frost after growing weather in

early spring. Varieties which commence spring growth late and bloom late in the Central Zone are valuable.

Long periods of extreme heat: Thin roses out of the question; loss of size, fading, and bluing most serious faults; shade protection advisable; perfume seldom noteworthy.

Extremely long growing season: Medium growers with hardiness approach the size of climbers; loss of foliage most objectionable.

Very little rain, dry, hot conditions: Roses which ball and mildew in other districts are splendid here. Varieties of full petalage even with thin substance do well; black-spot not as prevalent as with moist conditions.

Heavy, dry winds; occasional hot winds: Require protection from winds; roses which scorch in heat undesirable.

"CUTTING" ROSES FOR THE INTERIOR SOUTHERN ZONE

Numerals apply to foliage retention: (1) Very good, (2) good, (3) lost early. An asterisk (*) preceding a variety signifies it to be of the most constant and pleasing fragrance characteristic of each particular color.

The descriptions of the roses given in the following lists will be found in the chapters on the various classes, and it should be noted that where there is not a chapter on a particular class, such rose will be found in the chapter on "Additional Classes."

Red

*Hadley	HT. (2)
*Etoile de France . . .	HT. (2)
*American Beauty . .	HP. (2)
(Especially in high altitudes.)	
Red Radiance	HT. (2)
Jonkheer J. L. Mock .	HT. (3)
Red Cochet	T. (1)

Pink

*Rose Marie	HT. (2)
Maman Cochet	T. (1)
Mrs. George Shawyer	HT. (2)
*Radiance	HT. (2)
President Taft	HT. (2)
Mme. Abel Chatenay	HT. (2)

Yellow

Mme. Vermorel	T. (1)
Mme. Charles Lutaud	HT. (2)
Mrs. Dudley Cross . .	T. (1)
Alexander Hill Gray .	T. (1)
Miss Alice de Rothschild	T. (2)
Mme. Jenny Gillemot	HT. (2)
Golden Ophelia	HT. (1)

Light

White Maman Cochet	T. (1)
Kaiserin Auguste Vik-	
toria	HT. (2)
*Josephine Thomas . .	HT. (2)
William R. Smith . . .	T. (2)
Mrs. C. Lamplough . .	HT. (2)
Lady Plymouth	T. (1)





PLATE VI. Roses as affected by adverse climates

1. Columbia, HT. (left), scorched (blasted in bud) in extremely hot conditions in Southern Zone; (right) same rose under ordinary hot-weather conditions.
2. A rose which mildews badly, even in a sunny position in seacoast areas.
3. Mrs. Herbert Stevens, T., balls and fails to open in very damp conditions, even with reasonable heat.

ROSES FOR GARDEN DECORATION IN THE INTERIOR
SOUTHERN ZONE

Numerals apply to foliage retention: (1) Very good (2) good, (3) lost early.

Red

Gruss an Teplitz . . . HT. (2)
Louis Philippe . . . C. (1)
Mme. Rathswell . . . T. (1)

Yellow

Etoile de Lyon . . . T. (1)
Mme. Jean Dupuy . . T. (1)

Pink

Duchesse de Brabant . T. (1)
Hermosa C. (1)

Light

Frau Karl Druschki . HP. (3)
Marie Van Houtte . . T. (1)
Souv. de la Malmaison Bour. (1)

SMALL EVERBLOOMING POLYANTHA ROSES FOR
BORDERS IN INTERIOR SOUTHERN ZONE

Foliage usually well retained

Red

Eblouissant
Leonie Lamesch

Yellow

Eugenie Lamesch
George Elger

Pink

Cécile Brunner
Orleans

Light

Tip-Top
White Cécile Brunner

ROSES FOR HEDGES AND MASSING IN THE INTERIOR
SOUTHERN ZONE

Red

Fellemborg C. (1)
George Dickson . . . HP. (3)

Yellow

Golden Oriole . . . T. (1)
(In districts with little frost.)
Rosa Hugonis . . Sp. (1)

Pink

Gloire de Dijon . . . Cl.T. (1)
Killarney HT. (2)

Light

Danæ H.Musk. (2)
Gloire Lyonnaise . HP. (1)

50 ROSES FOR ALL AMERICAN CLIMATES

CLIMBING ROSES FOR THE INTERIOR SOUTHERN ZONE

Numerals apply to foliage retention: (1) Very good, (2) good, (3) lost early

Red

- Cl. American Beauty HW. (3)
- Cl. Gruss an Teplitz Cl.HT. (1)
- Cl. Laurent Carle . Cl.HT. (2)
- Reine Olga de Wurtemberg Cl.HT. (2)

Pink

- Bloomfield Decora-
tion HW. (1)
- Cl. Mme. Abel Cha-
tenay Cl.HT. (2)
- Cl. Cécile Brunner Cl.Poly. (1)
- Cl. Clotilde Soupert Cl.Poly. (2)
- Cl. Maman Cochet Cl.T. (1)
- Cl. Mrs. George
Shawyer Cl.HT. (2)

Yellow

- Cl. Mme. Mélanie
Soupert Cl.HT. (2)
- Cl. Perle des Jardins Cl.T. (1)
- Cl. Sunburst Cl.HT. (2)
- Maréchal Niel Nois. (1)
- (In sections without frost.)
- Rêve d'Or Nois. (1)
- William Allen Rich-
ardson Nois. (2)

Light

- Cl. Kaiserin Auguste
Viktoria Cl.HT. (2)
- Cl. White Maman
Cochet Cl.T. (1)
- Lamarque Nois. (2)
- (In sections with little frost.)
- Mme. Alfred Car-
rière H.Nois. (2)

CHAPTER IX

THE HYBRID PERPETUAL ROSES

THE Hybrid Perpetual rose is traced to the China (*R. chinensis*), with infusions of Damask, Provence, and Bourbon blood. The first Hybrid Perpetual was introduced in 1812, and was a cross between the Hybrid China and the Damask; after this the race became a combination of the four original stocks, and, while differing in some characteristics, was uniform enough to be listed under one head.

The breeding in the beginning was by chance fertilization, and the list of varieties became very large. Parsons, in his book published in 1847, preferred to designate them as "Remontants," explaining that they literally "grew again," and he further claimed that they bloomed more than once. He listed over thirty varieties, most of which are practically unknown today.

The decline of the Hybrid Perpetual may be traced to the advent of the Hybrid Tea, and few new Hybrid Perpetuals are being introduced at present. Nevertheless, the Hybrid Perpetual is

much the hardier class, and, consequently, must be grown in the extreme Northern Zone in preference to the Hybrid Tea. Further, it is also very attractive in its spring bloom and for exhibition purposes under cool, moist conditions.

The best analysis of the Hybrid Perpetual was made by H. B. Ellwanger in his valuable book, "The Rose," published by Dodd, Mead & Co., in 1882, and many times since reprinted without change. Ellwanger knew the Hybrid Perpetual as no one knows it now, and from his knowledge he divided it into classes, describing hardiness and other general characteristics.

The tests of later years prove many of Ellwanger's statements, although no one has given the Hybrid Perpetual class the study he subjected it to, mainly because the need ceased to exist for such research. With the permission of his publishers, the salient facts as affecting the Hybrid Perpetual situation of today are quoted in abbreviated form. Unfortunately, many roses of Ellwanger's time are absent from present-day catalogues.

In reading his descriptions, it must be remembered that he writes principally of the climate of central New York and considers its cold extremes and seasons.

The *Baronne Prévost* type originated from the

rose of that name, bred by Desprez, sent out by Cochet in 1842. Characteristics: The hardiest of all Hybrid Perpetuals; free bloomers in autumn; long, stout shoots; thorns red, generally short and of unequal length; foliage rather oval, somewhat crimped; flowers large or very large, flat shape, very full, fragrant; color, some shade of rose.

Best assorted varieties: Baronne Prévost, Caroline de Sansal, Boieldieu.

La Reine type (Laffay, 1844). Characteristics: Hardier than any other type except Baronne Prévost; wood light green, with occasional thorns, of strong growth; foliage pale green, crimped and with seven leaflets; color, various shades of rose; generally semi-globular form, large, somewhat fragrant; free in the autumn.

Best varieties: La Reine, Anna de Diesbach, Paul Neyron, François Michelon.

Giant of Battles type. Description omitted because of susceptibility to mildew, lack of hardiness, difficulty of propagation.

Varieties: Géant des Batailles (Giant of Battles), Arthur de Sansal, Crimson Bedder.

General Jacqueminot type (Roussel, 1853). Probably originated from the Hybrid China rose, Gloire des Rosomanes, now well known in California as "Ragged Robin," and used considerably as an

understock; moderately hardy, but less so than *Baronne Prévost*, *Jules Margottin*, and *La Reine* types. Characteristics: Shoots vigorous, not very thick, and generally upright, with light green spines; handsome pointed foliage; fragrant flowers, mainly red and crimson; varies in autumnal bloom, as a family being more shy than the others.

Varieties: *General Jacqueminot*, *Beauty of Waltham*, *Camille Bernardin*, *Dupuy Jamain*, *Leopold Premier*, *Marie Baumann*, *Maurice Bernardin*, *Pierre Notting*, *Charles Lefebvre*, *Alfred Colomb*, *Duke of Edinburgh*, *Prince Camille de Rohan*, *Senateur Vaisse*.

Victor Verdier type (*Lacharme*, 1852). Doubtless from the *La Reine* type, crossed with the Bourbon strain. Characteristics: Rather tender; most free flowering of all; moderate growth; canes stout, upright, nearly smooth, of reddish green with an occasional reddish thorn; foliage very large, deep lustrous green; flowers large, well built up; color rose and pink, but no fragrance.

Varieties: *Victor Verdier*, *Captain Christy* (*Victor Verdier* × *Safrano*—often classed as an Hybrid Tea), *Etienne Levet*, *Hippolyte Jamain*, *Julius Finger*, *Mlle. Eugénie Verdier*, *Marie Finger*.

Jules Margottin type (*Margottin*, 1853). Characteristics: Very hardy; wood light green, some-

what numerous red thorns; shoots rather stout; generally vigorous; crimped foliage; flowers large, very full, somewhat flat; color shades of rose and carmine almost without perfume; free in autumn. Difficult to propagate by cuttings; vigorous when budded.

Leading varieties: Jules Margottin, Abel Grand, Duchesse de Vallombrosa, John Hopper, Magna Charta, Mlle. Thérèse Levet, Mme. Gabriel Luizet, Mme. Lacharme, Marguerite de St. Amand.

Duke of Edinburgh type (George Paul, 1868). Characteristics: Habit of growth much like General Jacqueminot (from which it was grown), with foliage longer and larger; flowers large, bright crimson, little fragrance; defects were the burning of the bloom under hot sun and lack of autumnal blossoms. Like most of this class of the present day, the family was a beautiful one when grown in a moist, cool climate.

Varieties best known: Brightness of Cheshunt, Dr. Hooker, Duke of Connaught, Duke of Teck, S. Reynolds Hole, Sultan of Zanzibar, The Shah.

In addition to these families, as thus described by Ellwanger, he divides the class still further by using *Senateur Vaisse*, *Charles Lefebvre*, *Prince Camille de Rohan*, and *Alfred Colomb* as the heads of other types, but these are so like the General

Jacqueminot race that it hardly seems necessary to quote their differences.

Outside of special cases, as noted in the lists, the Hybrid Perpetuals need not be considered, except in the extreme North, where they are valuable on account of their hardiness, and on the Pacific Northwestern seacoast, the New England coast, and the Pacific Southwestern coast for exhibition, in which districts they give finer flowers and also a much more continued blooming season than elsewhere. Their greatest fault, with few exceptions, throughout the remainder of the country, is that they have but one short blooming period. Further, the plant becomes ungainly in the long summers of the Southeastern and the Interior Southern Zones by reason of its habit of losing foliage. Many of the Hybrid Perpetuals blue easily and are discolored by rain. Loss of foliage among the best varieties is less noticeable in the Central Zone, and in the cooler coastal climates and the North may be overlooked.

Except in the Pacific Northwest and Southwest, the use of budded plants of the Hybrid Perpetuals is advised, and, in all cases, budded roses are as good or better than own-root stock. The Manetti is, as a rule, the most valuable stock for this class. Greater room is required in planting than for the Hybrid Teas, the average distance being 30 inches.



PLATE VII. GEORGE DICKSON, HP. Spring bloomer only; weak neck.
(See page 62.)



The bud, or junction between the understock and the top, should be about 3 inches below the finished level of the bed, and planting should be done with dormant stock and in the fall before heavy frost. To light and gravelly soil, clay loam should be added for the best results. Protect in the Northern Zone.

In England, exceptional hardiness is not so requisite as in our Northern Zone, and, owing to their greater beauty, many varieties of less than the maximum hardiness are naturally used. Descriptions of hardiness in foreign lists must not be considered accurate for our conditions.

Lately several Hybrid Perpetuals verging on yellow have been introduced, and these should be carefully tested in our climate; the best of them are described herein.

It is doubtful if the extremely hardy *Baronne Prévost* type can be secured, because their flowers are inferior to the newer sorts useful in moderate conditions. It is to be hoped, however, that nurserymen will supply these for our extreme northern climates.

The history of the Hybrid Perpetual makes it evident that great hardiness and everblooming characteristics were sacrificed abroad for more perfect beauty of flower for exhibition. Many really

valuable kinds have been lost sight of in the steady advance of widely heralded new varieties, particularly since the Hybrid Tea supplanted the Hybrid Perpetual in the work of the hybridizers. This was natural in England's cool, insular climate, without our extremes of cold, for there was, indeed, neither need nor opportunity to test varieties for ultimate endurance of cold.

The most recent of the hardiest fall-blooming Hybrid Perpetuals are included in our lists, and are marked "most hardy," with the hope that they may be used for our extreme North.

It would be possible to experiment in our extreme North with most of the roses given, but they would require very careful protection. This, however, is no obstacle to the interested grower.

The average grower will find best results in all sections with the recommended sorts.

The beginner may easily distinguish the Hybrid Perpetual, because it is of larger growth than most dwarfs, and has stiff, thick stalks supporting solid-colored foliage, and bearing flowers of one solid color, which, as a rule, are wonderfully fragrant and of most attractive appearance.

The varieties described cover the widest possible color arrangement, with selected kinds for our varied climates.

RECOMMENDED HYBRID PERPETUAL ROSES

The initials after each rose indicate the section suggested: thus, N. Northern; Cen., Central; S.-E., Southeastern; Pac. N.-W., Pacific Northwestern; Pac. S.-W., Pacific Southwestern; I. S., Interior Southern.

ALFRED COLOMB. Lacharme, 1865. (From General Jacqueminot.)

Quite hardy.

Light carmine-crimson; very large, full, fine globular form; extremely fragrant. Flowers more abundantly than its parent; needs heavy soil. Often like Marie Baumann. [N. Cen.]

ALFRED K. WILLIAMS. Schwartz, 1877. (From General Jacqueminot.) *Quite hardy.*

Dark carmine-crimson; large, full, perfect form, imbricated; very fragrant. Should be budded each year; not to be depended upon except for exhibition.

Cen. Pac. N.-W. Pac. S.-W.

AMERICAN BEAUTY. Sent out by Ledéchaux in 1875 as Mme.

Ferdinand Jamin. Imported from Europe by Bancroft & Field Bros. in 1886, and by them renamed. *Very hardy.*

Imperial pink to deep rose; remarkably fine form, very large, full, cupped; rich fragrance. A very popular greenhouse cutting rose throughout the entire country.

Has been a disappointment as an outdoor rose in the East wherever tried, but in the arid regions of the I.S. has proved to be most valuable, blooming for a long-continued season. Noted by F. E. Lester, of Messila Park (altitude 3,800 feet), N. Mex., as blooming for him from March 20 to December, although, even in this dry location, it is subject to mildew, but does not show black-spot nor lose its foliage early. May be recommended for interior climates of altitude where the thermometer does not go well below zero for long periods. Recommended by Holden's Nursery, West Palm Beach, Fla., as being the best Hybrid Perpetual; they advise shade from 10 A.M. to 3 P.M. Noted by A. J. Keen, Phoenix, Ariz., as being a standard rose for that section. Recommended for Utah as result of a questionnaire sent out by Salt Lake City Chamber of Commerce.

I.S.

ANNA DE DIESBACH. Lacharme, 1858. (From La Reine.) *Very hardy.*

Carmine; very large, double, semi-globular flowers; fragrant. Free in autumn. [N.]

BARONESS ROTHSCHILD. Sent out by Pernet, 1867, as *Baronne Adolphe de Rothschild*. *Very hardy*.

Shell-pink, shaded rose; very large; without fragrance. Difficult to grow from cuttings; good for exhibition.

In Pac. N.-W. and Pac. S.-W. may be grown as a large bush if not desired for best cut blooms or for exhibition.

N. Cen. Pac. N.-W. Pac. S.-W.

BARONNE PREVOST. Desprez; intro. by Cochet, 1842. *Most hardy*.

Pure rose-color; very large, full, flat form; fragrant. Free in autumn. May be grown as a pillar to advantage. [N.]

BOIELDIEU. Garçon, 1877; intro. by Margottin fils. (Jules Margottin $\times$ Baronne Prévost.) *Most hardy*.

Cherry-red; very large, full, flat form; fragrant. Free in autumn. [N.]

CANDEUR LYONNAISE. Croibier, 1914. (From Frau Karl Druschki.) *Hardy*.

Pure white, sometimes tinged sulphur-yellow.

Recommended by Walsh in Massachusetts.

N. Cen. Pac. N.-W. Pac. S.-W.

CAPTAIN HAYWARD. Bennett; 1893. (From Triomphe de l'Exposition.) *Quite hardy*.

Scarlet-crimson; perfect form when grown under cool, moist conditions; fragrant.

Foster-Melliar advises close pruning, vigorous thinning, and growing as a "maiden"* for perfect results. Poor in hot weather. A number of authorities agree that this rose is among the very best autumnal bloomers of the H. P.'s. Recommended by Mrs. H. S. Goodell, of Houghton, Mich. [Pac. N.-W.]

CAROLINE DE SANSAL. Desprez, 1849; intro. by Jamain. *Most hardy*.

Flesh-color; large, full, flat flowers; somewhat unreliable.

Better in September than in June in New York.

N. (interior especially).

CHARLES LEFEBVRE. Lacharme, 1861. (Claimed to be from General Jacqueminot $\times$ Victor Verdier.) *Very hardy*.

Velvety crimson, shaded in center—fades quickly and blues under heat; large, fine form; fragrant. Grows well, and may be pegged down if desired. [N. Cen.]

*"Maiden" is the term used in England to denote the first blooming year of a rose plant.

CLIO. W. Paul, 1894. (From Triomphe de l'Exposition.) *Quite hardy.*

Flesh, deepening in center; large fine form; slight fragrance; needs thinning. Does well pegged down for garden decoration. Balls badly in damp weather.

Reported by Mrs. Young, Winslow, Ariz., as giving continued bloom through the season.

Cen. Pac. N.-W. I.S. (with altitude).

CORONATION.* H. Dickson, 1913. *Quite hardy.*

Bright shrimp-pink; very large. Fine foliage. Exhibition variety.

[Cen. Pac. N.-W. Pac. S.-W.

DUPUY JAMAINE. Dupuy, 1868. *Quite hardy.*

Bright cerise; good rose for garden, but of only fair form; very fragrant. Good foliage.

[N.

EUGENE BARBIER. Barbier, 1921. (Frau Karl Druschki $\times$ Rayon d'Or.) *No data on hardiness in this country.* Not a true Hybrid Perpetual, although so classed.

Bright canary-yellow, shaded coppery golden yellow; very large cupped form.

Pac. N.-W. Pac. S.-W. Cen. Test in North.

FISHER HOLMES. Sent out by E. Verdier, 1865, as Fisher et Holmes. (From Maurice Bernardin.) *Quite hardy.*

Dark reddish velvety crimson; rather small in size of bloom and growth, but distinct color; very fragrant. Foliage liable to mildew.

Gives autumn bloom in England, and may be expected to do so in coastal climates with long season, but not in the Central Zone. Ellwanger preferred this to General Jacqueminot. Pemberton and Foster-Melliar both list it.

N. Pac. N.-W. Pac. S.-W.

FRANCOIS MICHELON. Levet, 1871. (From La Reine.) *Very hardy.*

Deep rose, tinged lilac, reverse of petals silvery; very large, full, of globular form.

Recommended by Foster-Melliar on Brier stock. Record shows more constant bloom in America than England. Blooms later than most of its class, and is little affected by mildew. Do not prune as much as the average.

[N. Pac. N.-W.

*Must not be confused with the Hybrid Wichuraiana climber sent out under the same name by the English raiser, Turner, in 1912. The name really belongs to the climber, as it was the earlier.

FRAU KARL DRUSCHKI (syn. Snow Queen). P. Lambert, 1901.
(Merveille de Lyon × Mme. Caroline Testout.) *Very hardy.*

Snow-white, often flesh-pink in bud; extremely large, of beautiful form, but loose under excessive heat; almost scentless.

A wonderful white rose, popular everywhere, and especially good under cool conditions in seacoast sections with long season. Foliage subject to mildew and black-spot. Valuable for garden and exhibition uses. Gives almost as fine blooms on a large bush as if pruned hard; even for exhibition blooms prune less than the average; for garden decoration light pruning and thinning is enough; pegged down, more bloom is obtained. Ranked equal third in votes of English Rose Society's members for exhibition roses in 1922, equal first in 1923, also equal second for combined exhibition and garden 1923, and first for standards 1923. In American Rose Annual's referendum for 1923 stood first in New England and in Central States, second in Middle and Southern States, and fifth in Western States. Climbing sport not as good as parent. Poor on Mme. Plantier stock, West Palm Beach, Fla.—Manetti preferable. Mrs. Morse, of Charleston, N. H., reports it as being continuous but subject to black-spot. Miss Creighton, of west coast of Florida, reports it as continuous bloomer.

N. Cen. S.-E. Pac. S.-W. Pac. N.-W. I.S.

GENERAL JACQUEMINOT. Roussel, 1853. *Quite hardy.* Supposed to be a seedling from the HC., Gloire des Rosomanes (Ragged Robin).

Brilliant velvety crimson, with darker shadings; fairly large, nearly full; very fragrant. Mildews easily and gives few fall blooms.

Dean Hole claims the General is unsurpassed as a pillar; the Pac. N.-W. would be the climate for such training. Recommended for Omaha, Neb., by Mrs. E. M. Ellsworth. Mrs. C. H. Morse, of Charleston, N. H., reports this as giving continuous bloom, but subject to some black-spot. Recommended by George Hamilton, of Somers, Wis., for long blooming season, fall bloom, good number of blooms, large growth.

N. (with protection).

GEORG ARENDS. Hinner, 1910. *Quite hardy.*

Soft light pink, solid color; very large and full; most fragrant; better than most as a fall bloomer.

Noted as tender at Mt. Desert, Maine, by Miss Anne Lorenz

in American Rose Annual. Recommended by George Hamilton, of Somers, Wis., for long season, fall bloom, good number of blooms, large growth, but mildews.

N. Cen. Pac. N.-W. Pac. S.-W.

GEORGE DICKSON. A. Dickson, 1912. *Hardy*. Classed by the introducer as an HT., but with distinct HP. characteristics.

Dark velvety crimson; very large, heavy blooms, which often cannot be supported; fragrant. Foliage mildews badly. This rose is reported as being slightly susceptible to black-spot throughout the Pac. N.-W. Claimed to do well as a climber in the I.S. Placed equal first by the votes of the English Rose Society as an exhibition rose in 1922; equal fifth in 1923. An exhibitor's rose.
[Pac. N.-W. I.S.]

GLOIRE DE CHEDANE-GUINOISSEAU. Guinoisseau & Chédane, 1908.
Quite hardy.

Velvety vermilion-red, shaded deep red on the best specimens; very large and full, fine form; fragrant. Good foliage, growth, and stem.
[N. Cen. Pac. N.-W. Pac. S.-W.]

GLOIRE LYONNAISE. Guillot fils, 1884. (Baroness Rothschild × Mme. Falcot [T.].) *Most hardy*. Often listed as an HT. on account of its breeding, but with HP. characteristics.

White, tinted yellow-fawn; large, but somewhat flat; slight tea perfume; only one blooming period in the East. Never sets seed-hips, and generally has been considered sterile. Foliage remarkably fine and lasting. Blooms over a long period in the S.-E., Pac. S.-W., and I.S., where it may also be grown if desired.

N.

H. V. MACHIN. A. Dickson, 1914. *Very hardy*. Classed by the introducer as an HT., but with distinct HP. characteristics.

Intensely black-grained scarlet-crimson; fragrant. Only slight fall bloom in the Cen., with a total of twenty flowers. Good growth; strong stem. Good foliage; color distinct and attractive. Fine for exhibition.
[Cen. Pac. N.-W.]

HORACE VERNET. Guillot fils, 1866. (From General Jacqueminot.)
Fairly hardy.

Velvety scarlet-crimson, with dark shading; large, perfect form; fragrant. Exhibition only. Lasts well but a shy bloomer.

Foster-Melliar advises budding on fresh stocks each year. Best stock is seedling Brier in England.
[Pac. N.-W.]

HUGH DICKSON. H. Dickson, 1904. *Quite hardy.*

Brilliant crimson, shaded scarlet; fine form; fragrant. Vigorous. An all-round HP., very little affected by mildew; does well for garden decoration if pegged down.

Was ranked equal third in votes of English Rose Society for exhibition roses in 1922; equal first 1923. Sometimes grown in the South, and recommended by Mrs. Wm. Pratt, of Savannah, Ga.; gives one period of bloom. Recommended for Washington state by W. E. Sherbrooke, of Kirkland, for large growth.

N. Cen. Pac. N.-W. Pac. S.-W.

J. B. CLARK. H. Dickson, 1905. *Quite hardy.* Often listed as an HT., but with HP. characteristics.

Deep scarlet, shaded plum; large, full; fragrant. Very vigorous.

W. C. Wood, of Danville, Ky., recommends it as a pillar in 1923 American Rose Annual. Recommended by Mrs. H. S. Goodell, of Houghton, Mich. [N. S.-E. Pac. N.-W. I.S.]

JUBILEE. Walsh, 1897. (Victor Hugo $\times$ Prince Camille de Rohan.) *Quite hardy.*

Pure deep maroon. Has done well in Massachusetts.

N. Pac. N.-W.

LA REINE. Laffay, 1839. *Very hardy.*

Rose-color; large and full; somewhat fragrant. [N.]

LOUISE CRETTE. Chambard, 1915. *Quite hardy.* (Frau Karl Druschki $\times$ Cl. Kaiserin Auguste Viktoria.)

Snow-white, cream center; very large, full, fine form. Not yet thoroughly tested.

Described by H. L. Wettern, noted English rosarian, as being a grand exhibition rose of Frau Karl Druschki type, with a slightly yellowish tint. [Pac. N.-W.]

MAGNA CHARTA. W. Paul, 1876. (From Jules Margottin.) *Very hardy.*

Pinkish carmine; large size. Recommended for Omaha, Neb., by Miss E. M. Ellsworth. [N.]

MERVEILLE DE LYON (syn. White Baroness). Pernet, 1882. (Baroness Rothschild $\times$ Safrano.) *Very hardy.*

Lightest silvery flesh, center slightly peach; very large, double, cupped form; little fragrance. Does not last. No fall bloom. Affected by mildew. Prune long. Best pegged down.

N. Cen. Pac. N.-W.



PLATE VIII. Photographs of selected blooms grown under ideal conditions

1, Rose Marie, HT.; 2, Killarney, HT.; 3, Chateau de Clos Vougeot, HT.; 4, Mrs. Harold Brocklebank, HT.; 5, Mme. Marcel Delanney, HT.; 6, Lady Pirrie, HT.; 7, Lemon Pillar, H.Nois.; 8, Augustus Hartmann, HT.; 9, Gorgeous, HT.; 10, Mme. Maurice de Luze, HT.; 11, Lady Alice Stanley, HT.; 12, Jonkheer J. L. Mock, HT.



MME. GABRIEL LUIZET. Liabaud, 1877. (Sport from J. Margottin.)
Very hardy.

Light silvery pink; large, attractive form; mild but delicious fragrance. Subject to mildew. An early bloomer; does not last; no fall bloom. Prune long. [N. Cen.]

MRS. JOHN LAING. Bennett, 1877. (From François Michelin.)
Very hardy.

Soft solid pink; delightfully fragrant. Exceptionally strong stems. Longer flowering period than most of the class. Holds its foliage well in late seasons, but mildews. Good in size and form, although not a typical show variety. Few thorns.

Reported by Mrs. Young, of Winslow, Ariz., as giving continued bloom through the season. Same report received from various other sections of the country. For example: Mrs. John Howland, of Bridgeport, Conn.; Mrs. Walter E. Tobie, of Portland, Maine; in Omaha, Neb., one bloom period reported by Miss Ellsworth. A. J. Keen, Ariz., gives this as a principal variety.

N. Cen. Pac. N.-W. Pac. S.-W. I.S. S.-E.

MRS. R. G. SHARMAN-CRAWFORD. A. Dickson, 1894. *Quite hardy.*

Deep rosy pink; large flowers of good form, but hardly an exhibition sort; rather a good garden rose with long blooming season but liable to mildew. [Cen.]

PAUL NEYRON. Levet, 1869. (Victor Verdier $\times$ Anna de Diesbach).
Very hardy.

Rose to imperial pink; extremely large, fine form under ideal conditions, but liable to ball in wet; delightfully fragrant. Very tall grower, with always a few particularly fine fall blooms. Does well pegged down or as a pillar.

Recommended by George Hamilton, of Somers, Wis., for long season, fall bloom, good number of blooms, large growth. Shy at West Palm Beach, Fla., but bloom is fine. Miss Creighton, of western Florida, reports continuous bloom; subject to black-spot.

[N. Cen. Pac. S.-W. I.S.]

PRINCE CAMILLE DE ROHAN. E. Verdier, 1861. (From Maurice Bernardin.) *Hardy.*

Dark red to maroon, black shadings; good form; opens well in dampness. Probably the best of the very dark HP. roses; mildews in Central Pennsylvania. Recommended by Hazlewood Bros., of New South Wales, and by Miss Ellsworth, of Nebraska.

[N. Pac. N.-W. Pac. S.-W.]

66 ROSES FOR ALL AMERICAN CLIMATES

SUZANNE-MARIE RODOCANACHI. Lévêque, 1883. *Fairly hardy.*

Soft pink; large, full; slightly fragrant. Color and form last well, therefore easy to exhibit. [Cen.]

ULSTER. (A. Dickson, 1899.) *Quite hardy.*

Bright salmon; fragrant; good for exhibition.
Pac. N.-W.

ULRICH BRUNNER. Sent out by Levet, 1882, as Ulrich Brunner fils. (Sport of Anna de Diesbach.) *Quite hardy.*

Cherry-red; nice form in bud, although a trifle loose in open flower; very fragrant. One blooming season in the Central East, but gives continuous bloom in coastal climates, with long season.

A very popular, reliable rose, giving bountiful supply of fine cut blooms. If not pruned, gives fine garden display as large bush in Pac. N.-W., and Pac. S.-W. Recommended by Mrs. H. S. Goodell, of Houghton, Mich.

N. Cen. Pac. N.-W. Pac. S.-W.

XAVIER OLIBO. Lacharme, 1864. (From General Jacqueminot.)
Quite hardy.

Deep velvety blackish crimson; fragrant. Weak grower; shy; should be budded yearly. An exhibition sort only.
Pac. N.-W.

PRUNING OF THE HYBRID PERPETUAL ROSES

Except in the extreme North, the Hybrid Perpetual rose does not winter-kill below the proper pruning-level, and outside of the Pacific Northwest and the few varieties used in the Southern Zones, it is a class with one burst of bloom in the spring and very scattering blooms thereafter.

The English method of pruning is the correct one to use in the Northern, the Central, and the Pacific Northwestern Zones. For garden decoration and cut-flower purposes, leave more eyes than for ex-

hibition blooms. In all cases, cut out all dead wood, thin the center of the plant if too crowded; cut always to the outside eye, because this throws the growth outward. For ordinary purposes, leave from five to seven eyes on heavy wood, and from two to four eyes on light wood; slightly more wood may be left in the Pacific Northwest. On laterals of last year's growth from very strong old wood, leave not more than two or three eyes, depending on the size of the wood.

For exhibition or special cut-flower value, cut out all small and unripe shoots, prune to three or four eyes, and, after growth is started, keep the strongest shoots and remove the weaker growths, thereby supplying all the sap to the few retained.

In the Pacific Southwestern and Interior Southern Zones, where dormancy is obtained by the withholding of water in summer, prune lightly when watering is renewed in early fall, and prune in January on the same lines as noted above for the Central Zone.

If desired for garden decoration, Hybrid Perpetuals may be allowed to retain their height in the Southern Zones among varieties such as Ulrich Brunner, they being of strong growth and needing no artificial staking. In such cases, thinning and removing all dead wood is all the pruning necessary,

and while the individual blooms will not be as fine, there will, nevertheless, be some very good flowers. The main objection to such treatment will be the lack of leaves on all but the upper part of the canes at the end of the long growing season.

Where special pruning of Hybrid Perpetuals is needed, it has been suggested under the descriptions of the varieties in the foregoing list.

It is possible to cut back Hybrid Perpetuals in the East in July and sometimes secure a second bloom. This, however, is not always successful.

In England, the pegging down of canes tends to throw the sap to the lower buds and make them break, and this method is suggested, where it has been found beneficial, under the description of the roses.

Roses which have a spreading horizontal growth, and are not as upright as most Hybrid Perpetuals, of which Fisher Holmes is a specimen, should not be pruned as low as the remainder of the class, and always cut to a bud pointing upward.

In all pruning, cut to the eyes which will send the growth where you desire it. Usually an outside eye is best, unless you desire to throw the growth of the new shoot toward the center for the balancing of the plant.





PLATE IX. The first bloom on two Hybrid Tea seedlings, crosses of *Primerose* and *Duchess of Wellington*—both seeds taken from the same seed-hip. These plants were about two months old from germination when the blooms were produced. Note the difference in color of seedlings of the same breeding

CHAPTER X

THE HYBRID TEA ROSES

THE Hybrid Tea is now the most generally grown rose in England and France, and in our own country is extremely popular. Its history and breeding are recent enough to be easily verified: briefly, it is a cross between the Hybrid Perpetual and the Tea, and inherits the virtues and failings of both parents, the best varieties often taking the combined valuable characteristics, with only a slight loss through their weaknesses. In hardiness it excels the Teas as a class, and in blooming it is more constant than the Hybrid Perpetuals, but, per contra, it is seldom as hardy as the best of the Hybrid Perpetuals and flowers less continuously than the Teas. Its growth in the Central Zone is generally midway between its progenitors, but in the North it is much smaller than the Hybrid Perpetual, and in the Southwest and South it is rivaled or excelled by the Tea in vigor. The foliage is more resistant to mildew than most Hybrid Perpetuals, yet generally inferior to the Tea in this respect. Loss of foliage varies also

between the easily lost leaves of the Hybrid Perpetual to the long-lived Tea foliage. The form of the flower itself runs from single to double. The substance of the petals is of every thickness. The blossom opens quickly or balls easily, according to form and substance.

The size of the bloom is larger than all but the finest Teas, and smaller than the Hybrid Perpetuals as a type. In perfume it varies greatly, the reds and pinks being distinct and sufficient, often with Hybrid Perpetual Damask scent, while the lighter colored varieties are many times without fragrance, the most notable exceptions being Augustine Guinoisseau and Ophelia. Sometimes the only perceptible odor is faint, and not to be compared to finest perfume of either the Hybrid Perpetuals or the Teas.

The color of the class comprises almost every shade, and strength of stem and other characteristics vary in like degree. Altogether, the Hybrid Teas combine everything and anything!

The Hybrid Perpetual may be easily labeled as to sections of the country suitable for it, being as a class indicated for the Northern, Central, Southwestern, and Northwestern Zones—the Southeastern and Interior Southern Zones only for special varieties. The Tea is preferably grown in the

Southern, Interior Southern, and Southwestern Zones, although certain very hardy Teas do well as exceptions in the other zones, but never as well as they do in their proper locations.

But the Hybrid Teas may be grown from the extreme South to the extreme North, depending upon their various characteristics, hardiness, growth, foliage retention, resistance to mildew, lasting qualities, opening qualities, and the like. Many sorts there are, with many qualities.

As explained in previous chapters, it is suggested that roses in the different classes should be grown where they are best adapted to the various climates, and it is to give information as to this adaptability that this book has been written.

It would be possible to describe a very long list of Hybrid Teas, but the list that follows has been boiled down to the absolutely dependable kinds for each zone, with certain other varieties described and recommended as far as possible from all available information. The rules for selection will enable the rose-lover to select the kinds best suited to his particular climate.

It is again most earnestly urged that new roses be bought only after they have been seen growing, and not from catalogue descriptions, unless as a matter of test.

RECOMMENDED HYBRID TEA ROSES

The initials after each rose indicate the section suggested: thus, N., Northern; Cen., Central; S.-E., Southeastern; Pac. N.-W., Pacific Northwestern; Pac. S.-W., Pacific Southwestern; I.S., Interior Southern; I.N., Interior Northern.

The number of blooms per plant in the various zones is given where known. It should be understood that this is always an average, and not the record of but one plant.

ANTOINE RIVOIRE (syn. Mrs. Taft). Pernet-Ducher, 1896. (Dr. Grill × Lady Mary Fitzwilliam [seed parent of Mme. Caroline Testout].) *Very hardy*.

Flesh to cream-yellow, peach center, sometimes shaded light lilac; of camellia form, which holds center in heat; slight fragrance.

Best in spring, not only in bloom, but in strength of stem. Owing to loss of foliage, cannot be recommended for S.-E., I.S., or Pac. S.-W., but being almost immune from mildew is splendid in damp climates. Form seldom beautiful enough for exhibition. Can be grown in milder parts of N. Zone; should give more bloom in moist, cool sections; twenty-seven blooms in Cen. Zone.

Cen.

ASPIRANT MARCEL ROUYER. Pernet-Ducher, 1919. (Sunburst × unnamed variety.) *Hardy*.

Salmon-flesh to reddish apricot.

Recommended in 1922 English Annual by Mr. Taylor, of Edinburgh. Also recommended by Hazlewood Bros., of New South Wales, who describe the growth as vigorous and erect, with long buds opening to moderately full, shapely flowers. Doing well in Southern California where it gives medium growth, medium-sized flowers, lovely buds, not lasting as well as Mme. Charles Lutaud, but almost the same color. Continuous bloomer. Slight mildew only.

[Cen. Pac. N.-W. Pac. S.-W.]

AUGUSTUS HARTMANN. B. R. Cant, 1914.

Brilliant geranium-red, flushed orange; fragrant.

This rose was of only fair growth in Cen. Zone, and was discarded there. Is a favorite in England, being classed equal fifth in 1923 Annual for exhibition roses, and fifth for exhibition and garden combined. Can only be recommended for Pac. N.-W., as it becomes flat in heat and loses foliage. Hardy in Cen. Zone, but of weak growth and sometimes winter-kills close to the ground.

AVOCA. A. Dickson, 1907. *Very hardy.*

Crimson-scarlet; large, very long buds; perfumed.

Does not bloom well in Cen. Zone; recommended for the Pac. N.-W., by Mr. Currey.

BLOOMFIELD ABUNDANCE. Thomas, 1920; introduced by Bobbink & Atkins. (From Sylvia [Wich.] × Dorothy Page-Roberts [HT].) *Extremely hardy.*

Medium to light salmon-pink, shading to soft silvery flesh; small bud, open flower with high pointed center; slight fragrance; lasts well. Strong growth; fair stem; foliage almost perfect.

A dainty decorative rose, much on the shade of Cécile Brunner, but a larger and stronger grower; much hardier than the climbing sport. Dr. Belville, of Philadelphia, grows Bloomfield Abundance to perfection. In Cen. Zone only tips of wood winter-kill. Gave over three hundred blooms in the Portland, Ore., test of 1919, and scored over 93 per cent. Mr. Fish, of New Bedford, Mass., reports only one blooming period; in recommended zones is continuous. May be secured from Bobbink & Atkins.

Pac. N.-W. Pac. S.-W. S.E. I.S. Cen. (southern part).

BLOOMFIELD PERPETUAL. Thomas, 1920; introduced by Bobbink & Atkins. (Iceberg [Dwarf W.] × Frau Karl Druschki [HP].) Placed with HT.'s on account of its characteristics. *Extremely hardy, wood living to tips in Cen. Zone.*

Pure white; single, large size; mild fragrance. Bush grows in Cen. Zone up to 5 feet, and blooms continuously from spring to frost; occasionally of almost climbing habit. Foliage glossy, very free from disease. Good for massing or hedges. Not as hardy as *Rosa altaica*, but preferable in Cen. Zone on account of continuous blooming. [Cen.]

BLOOMFIELD PROGRESS. Thomas, 1915; introduced by Bobbink & Atkins. (Mary, Countess of Ilchester × Gen. MacArthur.)

Very fragrant, solid crimson flowers, a trifle darker than General MacArthur, but not as hardy in North, and holding its color and form better in hot weather; larger bud, fuller flower. Foliage fine.

A better bloomer than parents in Cen. Zone, where at its best. Hardy in upper South; its lasting makes it valuable. Not good enough for exhibition, but a fine cutting rose. Fifty blooms in Cen. Zone. Catalogued by Bobbink & Atkins.

Cen. (southern parts). Pac. N.-W. S.-W.

CARDINAL. J. Cook, 1904. (Liberty × red seedling.) *Very hardy in Cen. Zone.*

Cardinal-red; medium size, full, but opens flat and blues in heat. Stems strong. Foliage lasts.

Gives fifty blooms in Cen. Zone; for Mr. Gersdorff, on its own root, in Washington, it gave over thirty flowers in second year. Cen.

C. E. SHEA. Hicks, 1917. *Fairly hardy.*

Clear, solid pink. Discarded in Cen. Zone. Beautiful form and does very well in exhibition in Pac. N.-W. [Pac. N.-W.]

CHATEAU DE CLOS VOUGEOT. Pernet-Ducher, 1908. *Straggly grower, weak in Cen. East, but hardy.*

Velvety scarlet to dark velvety crimson, with some shading almost black; fragrant. Loses foliage early. Stems strong, but necks often weak.

A collector's rose. Twenty-two blooms in Cen. Zone. Twenty-six blooms of medium size reported by W. C. Wood, of Danville, Ky., in 1923 Rose Annual. Recommended by Breck-Robinson Nursery Co., of Lexington, Mass. [Cen. Pac. N.-W.]

CHRISSIE MACKELLAR. A. Dickson, 1913. *Hardy in Cen. Zone.*

Yellow-madder in bud, fading to orange-pink. Growth strong and bushy; foliage very good; a decorative only. Gives over sixty blooms in Cen. Zone. [Cen. I.S.]

CLARICE GOODACRE. A. Dickson, 1916. *Fairly hardy.*

Ivory-white to lightest chrome; long spiral bud; medium size; good lasting qualities; claimed to have tangerine perfume. Small growth; fine stem; good foliage. An exhibition rose. Particularly adapted to Pac. N.-W. and Pac. S.-W. Zones.

Pac. N.-W. Pac. S.-W.

CLARA WATSON. Prince, 1894. *Hardy.*

Deep salmon-pink to silvery cream-flesh; nice bud; medium size; holds center well; fragrant. Fine growth; nice stem; very fine foliage.

A better rose in Pac. S.-W. than Winnie Davis, as it holds its form better and has a sturdier neck. Form surpasses such roses as Pharisäer, and in heavy winds does not ball. Blooms well. A good dependable variety.

Reported by A. J. Keen, of Phoenix, Ariz., as being a principal variety there. [S.-E. Pac. S.-W. I.S.]

COLUMBIA. E. G. Hill, 1917. *Usually hardy in Cen. Zone.*

Light pink, with full petalage; opens somewhat flat in heat; deliciously fragrant. Good but not strong grower. In Cen. Zone gives thirty blooms in its second year. Of exceptional value in cool conditions; must be given careful protection. Good in early and late seasons in southern California. Scorches in heat.

Won Gold Medal at Portland in 1919, scoring 98.66 per cent; gave seventy-four blooms during this test.

Cen. (southern parts). S.-E. Pac. N.-W. Pac. S.-W.

COMTESSE DE CASSAGNE. M. Guillot, 1919. *Hardy.*

Rich coppery pink, shaded clear rose, occasionally quite yellow; large, lovely bud; holds center well. Growth and foliage good. Doing well in southern California, but lighter in color.

Noted by Mr. Eisele, of Henry A. Dreer's, Philadelphia, as being hardy in that section. [Cen. Pac. N.-W. Pac. S.-W.]

CORNELIS TIMMERMANS. Timmermans, 1919. (Pharisäer × Le Progres.) *Hardy.*

Clear pink, yellow edge; large; fragrant; forty petals; best in the half-open flower; discolors somewhat. Good foliage. Vigorous; free blooming. Has done well for Howard & Smith, Los Angeles, Calif. [Pac. S.-W.]

COURTNEY PAGE. McGredy, 1922.

Dark crimson; described in English Rose Annual as of fine form, fragrance, and growth.

Gold Medal, English Rose Society, 1921. Recommended by Frank Mason, Fielding, New Zealand, as a very fine bedding rose; also by Hazlewood, of New South Wales, as having good perfume and foliage, though fading somewhat. Not tested here.

CRIMSON CHATENAY. Merryweather, 1916. *Hardy.*

Bright crimson; fragrant.

Claimed by Bobbink & Atkins to be more vigorous than parent.

Has not yet been sufficiently tested to list accurately.

Try Cen. S.-E. Pac. N.-W. Pac. S.-W. I.S.

DIADEM. McGredy, 1922. *Hardy.*

Orange-crimson, suffused deep salmon to coppery yellow—a richer tone than Willowmere, and a much better bloomer; 50 petals. Moderate to good growth and foliage; long stems.

Doing well for Howard & Smith; also recommended by Frank Mason, of New Zealand. [Pac. N.-W. Pac. S.-W.]

DEAN HOLE. A. Dickson, 1904. *Very hardy.*

Pale silvery rose, with deep shading, sometimes muddy; nice shape; substance varies; above average size and cuts well; fragrant. Very nice growth and stem. Foliage mildews badly.

In England, stood equal seventh as an exhibition bloom in 1923. Recommended by Mr. Peterson of New Jersey, and listed for dry climates without cold extreme greater than Cen. Zone.

I.N. (southern parts). I.S.

DUCHESS OF WELLINGTON. A. Dickson, 1909. *Very hardy.*

Saffron-yellow, opens lighter, fades quickly but owing to substance of petal does not wilt; attractive bud, often stained crimson; open flowers loose, not fully double. Stems long and strong, neck very often weak. Growth very fine. Foliage good but lost sometimes in long seasons. Gives close to fifty blooms in Cen. Zone. Scored high in American Rose Society's votes.

A rose which is not noted in English lists and will be displaced by new introductions. Good for cutting early and late in East where hardiness is valuable. Is a great favorite in Pac. N.-W., being used there as a cut-flower on account of the improvement in neck and substance in that climate. Especially recommended by Herbert Oldham, of Bremerton, Wash. Also noted as doing well in Little Rock, Ark., giving continuous bloom and no foliage troubles. Dr. Mills, of Syracuse, N. Y., reports it as having long blooming season and fall blooms. [Cen. Pac. N.-W.]

ECARLATE. Boytard, 1907. *Extremely hardy.*

Light scarlet; short in bud, opens flat; medium size; does not last; no fragrance. Low, bushy growth; weak stem. Very good foliage. A sport from Camoens, in turn derived from Antoine Verdier. Gives over one hundred blooms in Cen. Zone, but of no cutting value; fine as decorative or bedding sort or for a hedge. [N.]

EDEL. McGredy, 1919. *Hardy.*

White, ivory flush at base; not as fine as Mrs. Charles Lamplough; balls somewhat easily. Strong grower.

Recommended for the west coast of Florida by Miss Creighton, and by Bobbink & Atkins for Cen. Zone. [Cen. S.-E. I.S.]

EDWARD MAWLEY. McGredy, 1911. *Hardy.*

Deep crimson, with darker shadings—varies; blues in extreme heat; good form, fairly full, remarkably fragrant; good stem. Foliage very fine and well retained. Growth medium.

S.-E. near coast. Pac. N.-W. Pac. S.-W.



PLATE X. LADY PIRRIE, HT. (See page 86.)



ELDORADO. Howard & Smith, 1922.

Deep yellow—does not discolor or ball; medium size, very double, lasting. Foliage good. Growth medium; good stem.

S.-E. Pac. S.-W. I.S.

ELLEN WILLMOTT. Bernaix, 1898. *Hardy in Cen. Zone.*

Silver-flesh, shell-pink center; medium size, with fair form which lasts. Stem good. Foliage remarkably fine. Recommended for damp climates. Does not ball; foliage does not mildew and is well maintained. Thirty-six blooms in Cen. Zone.

Cen. S.-E. Pac. S.-W.

ELLI HARTMANN. Welter, 1913. *Very hardy.*

Deep Maréchal Niel yellow; buds small, globular; open flower high center, good size, lasts very well for its color; slight fragrance. Tall but not equalized growth; usually strong stem. Very good foliage. Gives over thirty blooms in Cen. Zone and most valuable there.

Reported adversely as to color and shape by W. C. Wood, of Danville, Ky. Catalogued by Bobbink & Atkins. [Cen.]

EMMA WRIGHT. S. McGredy, 1918. *Hardy.*

Pure orange without shading. An attractive bedding variety of good habit, placed second by R. Murrell, of Roseacres, England.

A new rose which has not been tested in this country to any extent, and is noted by Hazlewood, of New South Wales, as single. Of decorative value in cool climates; foliage reported good.

ETOILE DE FRANCE. Pernet-Ducher, 1904. *Very hardy.*

Velvety crimson, fair form; very fragrant; balls in Cen. Zone, but opens well in S.-E. Zone. Good grower and a fair cutting rose.

Received high vote in American Rose Annual's referendum and is noted favorably by growers throughout the S. Zone, among whom is Mrs. Wolfe, of Panama City, Fla., and also A. J. Keen, of Phoenix, Ariz., who considers it one of his best varieties. [S.-E. I.S. I.N.]

HORTULANUS FIET (not to be confounded with Leenders' new rose, Hortulanus Albert Fiet). Verschuren, 1919. (Cissie Easley × Golden Star.)

Golden yellow. Recommended in the 1922 English Annual by Mr. Taylor, of Edinburgh, who cites it as "a grand grower and mildew-proof;" recommended by Hazlewood, of New South Wales.

Not tested. For experiment try in: Cen. Pac. N.-W. Pac. S.-W. I.S. S.-E.

FLORENCE PEMBERTON. A. Dickson, 1903. *Very hardy.*

Cream-white, suffused pink—holds color quite well; of fair form, medium size and petalage. Foliage seldom diseased. Very vigorous growth; stems, however, not always strong, except in Pac. N.-W.

Recommended by J. A. Currey, of Portland, Ore., as an exhibition variety. Gives over three dozen blooms in Cen. Zone; many more in Pac. N.-W. [N. Cen. Pac. N.-W.]

FRANCIS SCOTT KEY. J. Cook, 1913. (Radiance $\times$ unnamed crimson seedling.) *Hardy.*

Rich crimson, blues in heat; good form, large size, very double. Growth only fair; stem usually good.

This variety did not do well in Cen. Zone, and is not mentioned by Mr. Gersdorff, of Washington, in his one hundred varieties. It is, however, reported to do very well in Little Rock, Ark., although shy there as elsewhere, but very fine as a cutting rose.

Interior except extreme North.

FRANKLIN (also given as Francklin). Pernet-Ducher, 1919. *Hardy.*

Rosy flame-colored bud, opening vivid orange to yellow-salmon; most remarkable in bud and the open flower at once attracts attention. Decorative only. Stems often weak. Another HT. showing every evidence of Pernetiana parentage. Does not last. [Pac. N.-W. Pac. S.-W.]

F. R. PATZER. A. Dickson, 1909. *Hardy in Cen. Zone.*

Cream-buff, reverse light orange-pink; medium to large; form lasting.

Typical illustration of a rose discarded in England and our Cen. Zone for lack of bloom, poor growth, and foliage, but which improves in a dry climate with long growing season. Recommended by Mrs. James Harper, Jr., of Augusta, Ga., as a continuous bloomer, without mildew, not much black-spot, and does not lose foliage early. [Interior except extreme North.]

GENERAL MACARTHUR. E. G. Hill, 1904. *Extremely hardy.*

Bright crimson; good form; very fine fragrance; in heat becomes flat and shows open center, also blues and loses size. Fair growth in Cen. Zone.

Wonderful rose in Pac. N.-W. and Pac. S.-W., where it gives fine growth and blooms profusely during a long season. In England the most popular red rose for general cultivation; first

in 1923, and equal first of all colors in votes in English Rose Annual in 1922; also most popular red rose in American Rose Annual's referendum for the western states in 1922. Thirty-five blooms in Cen. Zone. Reported by Dr. Mills, of Syracuse, N. Y., as having fall bloom, with good number of cut-flowers.

N. Pac. N.-W. Pac. S.-W.

GENERAL-SUPERIOR ARNOLD JANSSEN. Leenders, 1912. *Extremely hardy.*

Bright crimson—in Cen. Zone is dark pink, nearly a solid color; form lasting; perfumed. Foliage seldom has disease. Not an exhibition rose. Thirty-four blooms in Cen. Zone. [N. I.S.

GLADYS HOLLAND. McGredy, 1917.

Buff- to orange-yellow. Twenty-fifth in English Annual for exhibition in 1923. Poor grower in Cen. Zone and discarded there for general cultivation. Exhibition only. [Pac. N.-W.

GOLDEN OPHELIA. B. R. Cant, 1918. (Sport of Ophelia). *Hardy.*

Golden yellow center, yellow-cream at edges; shorter bud than Ophelia, but holding center better; smaller and less pointed; slight fragrance; petals have less substance than its parent, but lasts. Nice grower, with very fine and retained foliage; stems not so stout as Ophelia. Does well in shade in Pac. S.-W. and very well in winter in S. Zones.

Much to be preferred to most yellows for general garden cultivation and ordinary cut-flowers. Recommended by Hazlewood, of New South Wales. [Pac. N.-W. Cen. Pac. S.-W. S.-E.

GOLDEN SPRAY. H. Dickson, 1917. *Hardy.*

Clear golden yellow—lovely color until fully opened; long bud; open flower quite single, good size, holds color fairly well. Fair growth in Pac. S.-W., small growth in Cen. Zone. Nice foliage. Does well as a standard in southern California. Decorative only.

Recommended by Mr. Currey. [Pac. N.-W. Pac. S.-W.

GORGEOUS. H. Dickson, 1915. *Hardiness good.*

Deep orange-yellow, veined reddish copper; shape loose, good petalage, large; lasts well. Growth, stem, and foliage good.

Classed as equal first in England as an exhibition rose in 1923 Annual, and equal second for exhibition and garden same year, but only twenty-eighth for garden cultivation alone. Recommended especially for Pac. N.-W. Zone. Opens too quickly in heat. [Cen. Pac. N.-W.

80 ROSES FOR ALL AMERICAN CLIMATES

GRANGE COLOMBE. P. Guillot, 1911. *Very hardy.*

Outer petals cream, center usually yellow-buff, with, sometimes, a tinge of shrimp-pink; bud long, but opens loose; good size, but does not last well; slight fragrance. Nice bushy growth; stem often strong and of fair length. Little affected by disease. Gives over fifty blooms in Cen. Zone, and does well there early and late, but needs a cool climate. Must be cut in early bud if at all. Does well in Pacific N.-W.

Pac. N.-W.

GRUSS AN TEPLITZ. Geschwind, 1897. ([Paxton × Fellemberg × Papa Gontier] × Gloire des Rosomanes.) *Extremely hardy.*

Velvety crimson, shaded maroon; short bud, opens flat and loose; medium size; very fragrant. Remarkably fine growth and fairly free of mildew. Usually holds foliage well. In a class by itself, and may be used over the entire country. A remarkable bloomer, giving over one hundred blooms in Cen. Zone.

Reported to have sported for Miss Mary Simons, of Brockton, N. Y., giving pink roses, large and full. Among many recommendations from different parts of the country may be mentioned Cheyenne, Wyo.; Omaha, Neb.; Phoenix, Ariz.; and west coast of Florida.

[All zones.]

HADLEY. Montgomery Co., 1914. ([Liberty × Richmond] × seedling × General MacArthur.) *Fairly hardy.*

Velvety crimson to darkest black-purple—blues in extreme heat more than Hoosier Beauty; double and attractive in form; fine fragrance. Foliage good. Stem usually long and strong. Weak grower in Cen. Zone; satisfactory in cool, moist climates of Pac. N.-W., and Pac. S.-W.

Reported by Miss Creighton, of western Florida, as continuous. Pac. N.-W. Pac. S.-W. S.-E. I.S. Cen. (southern parts).

HAWLMARK CRIMSON. A. Dickson, 1920. *Hardy.*

Crimson-maroon, semi-double; decorative rose of somewhat similar color to Red-Letter Day and K. of K., but with the advantage of better foliage, more fragrance, and perhaps finer lasting qualities, although of smaller growth.

Placed among the twelve best dwarf decorative varieties by the Rose Society of New South Wales, 1921 and 1922. Reports from Poulsen Bros., New Zealand, advise that there this rose has entirely superseded Red-Letter Day.

Cen. Pac. N.-W. Pac. S.-W.

HELEN GOULD (Balduin). P. Lambert, 1896; Balduin was name given by originator, but intro. in U. S. by Dingee & Conard Co. as Helen Gould in 1902. *Good hardiness.*

Bright watermelon-red. Extensively used throughout the South.

Catalogued by U. S. Nursery Company, Roseacres, Miss., and J. Van. Lindley, Pomona, N. C. Does well in New Orleans, and reported to be valuable in low altitudes in the North—as example, in Boise, Idaho, for Miss Augusta Wilkinson. Also recommended for west coast of Florida by Miss Creighton. Not reported as valuable in North.

S.-E. Interior, except extreme North.

HENRIETTA. Merryweather, 1916. *Hardy.* Classed as an HT., but one would suspect Austrian Brier blood.

Coral-red with yellow and shrimp shadings, much the same as Mme. Edouard Herriot; semi-double, medium size; does not last; fragrant. Upright growth; strong stem. Fair foliage.

Not yet used to any extent in America, but superior to Mme. Edouard Herriot in strength of stems, which do not wilt. May be of much importance.

Pac. N.-W.

HOOSIER BEAUTY. Dorner, 1915. *Fairly hardy.*

Velvety crimson, with darker shadings; very nice form; fine fragrance. Stem long and fairly strong. Of only fair growth in Cen. Zone; much larger plants in Pac. N.-W., and Pac. S.-W. Continuous bloomer through season. Some mildew; no black-spot; holds foliage well. Blues less in great heat than Hadley, as noted in this country, and confirmed by letter from Poulsen Bros., of New Zealand. [Pac. N.-W. S.-E. Pac. S.-W. I.S.]

IMPERIAL POTENTATE. Clark Bros., 1921. *Hardy.*

Clear silvery pink; large; double. Did very well in the International Rose-Test Garden at Portland, Ore. [Pac. N.-W.]

IONA HERDMAN. McGredy, 1914. *Fairly hardy.*

Clear saffron-yellow—a distinct color that does not fade; double; opens with loose petalage but attractive form. Of little good for cutting, but fine as a decorative.

Discarded in England and our East for weak growth, this rose comes into its own in the Pac. S.-W., when used as a pillar rose. Catalogued by Bobbink & Atkins. [Pac. S.-W.]

82 ROSES FOR ALL AMERICAN CLIMATES

IRENE THOMPSON. McGredy, 1921. *Hardy*.

Remarkably distinct melon-yellow, orange center, outer petals cream; double, but cupped, yet holding color and center in heat; perfumed. Dark green, mildew-proof foliage. Medium grower.

A rose of fine possibilities, very good in Pac. S.-W. Has also done well in the hot climates of New Zealand, Australia, and New South Wales, as advised by our correspondents there.

S.-E. Pac. S.-W. I.S.

IRISH ELEGANCE. A. Dickson, 1905. *Hardy*.

Bronze-orange-scarlet bud, soft salmon-apricot when opened—fades in heat; single, large, opens quickly. Very good foliage.

Very fine growth in Pac. N.-W. [Pac. N.-W.]

IRISH FIREFLAME. A. Dickson, 1913. *Not hardy in Cen. Zone*.

Deep maddery orange, splashed crimson, changing to old-gold or soft fawn when open—beautiful color; single, medium size; perfumed. Foliage good. Stem weak; growth good in S. Zones; does well in shade in Pac. S.-W., but flower and stem wilt in heat. (Old Gold much to be preferred in Cen. Zone and where frosts obtain.) [Pac. S.-W.]

JACQUES PORCHER. P. Guillot, 1914. *Very hardy*.

Cream-flesh to peach center, occasionally suffused light yellow; fair bud; open flower flat in heat but center full; medium to small; lasts well even with thin substance; little fragrance. Growth very tall and bushy; stem short yet fairly strong. Foliage very free from mildew and spot and holds well. This variety is only fair for cutting, and the color is too light for great popularity. Gives well over sixty blooms in Cen. Zone, and many more in California where its size is greater. Has more virtues and less faults than many kinds. Discolors and balls in damp winds.

Recommended by W. C. Wood, of Danville, Ky.

Cen. Pac. S.-W. I.S.

JONKHEER J. L. MOCK. Leenders, 1909. *Very good hardiness*.

Carmine, with deep shadings, silvery pink inside; very large, with many petals of great substance, perfumed. Tall growth and very long, strong stem. Foliage mildews and is lost early. Very fine in heat but balls in dampness.

A variety with bad faults and splendid virtues. Received a large vote in American Rose Society's referendum for Central

and Middle West. Over thirty blooms in Cen. Zone. Does well in Washington, D. C., in the I.S., and has been recommended, among others, by F. E. Lester, of Messila Park (altitude 3,800 feet), N. Mex., for continuous bloom, but he states that foliage drops earlier than American Beauty in the same region. Also recommended by Frank Estabrook, of Denver, Colo., and for west coast of Florida by Miss Creighton, and by E. L. Crane, of Humboldt, S.-E., Neb., and the Westover Nurseries, of Clayton, Mo. [Cen. S.-E. Interior (except extreme North).

JOSEPH HILL. Pernet-Ducher, 1903. *Fair hardiness.*

Light salmon-pink, with orange to copper shadings; beautiful form; lasts well; slight perfume. Growth irregular; stem usually good. Foliage seldom mildews, but is lost in long seasons. Best in Pac. N.-W. as an exhibition rose; shy in Cen. Zone and not hardy for N. Zone; varies greatly. Some growers recommend a light soil. Should only be purchased in two- or three-year-old plants. [Pac. N.-W.

SEEDLING No. 347. Howard & Smith. (To be disseminated as Josephine Thomas.)

Light orange-salmon in center, outer petals gradually shading to cream-flesh—does not fade or discolor; perfumed; sixty petals. Somewhat short in bud; opens a trifle flat, which, however, is one of its virtues, preventing it from balling in damp weather; always carries a high-pointed center of smaller petals. Perfect foliage. Of wonderful growth; very fine stems. Should be universally popular for garden decoration, with good cutting value.

(Not tested except in Pac. S.-W.) Pac. S.-W. S.-E. I.S. Try in Cen.

KAISERIN AUGUSTE VIKTORIA. Lambert & Reiter, 1891. (Coquette de Lyon × Lady Mary Fitzwilliam.) *Very hardy.*

Primrose; double, fine shape, above medium size; slight fragrance; little affected by adverse conditions. Foliage very fine and resistant. Fair growth in N. and Cen. Zones; larger elsewhere; stem good.

In the 1923 referendum of the American Rose Society, the extreme N. and extreme S.-E. Zones placed this variety; elsewhere it was overlooked. In Pennsylvania it gives few blooms, but was nevertheless, heavily voted for in 1921. Does well for Mr. Gersdorff on own roots in Washington, D. C., and recommended in New South Wales, where its color is unique and

it does not discolor under rain, wind, or heat. Recommended by A. J. Keen, of Phoenix, Ariz.; F. E. Lester, Messila Park, N. Mex.; and Miss Augusta Wilkinson, Boise, Idaho. Noted as doing well for E. L. Crane, of Humboldt, S.-E. Neb., and recommended by Westover Nurseries, of Clayton, Mo.

N. S.-E. Pac. N.-W. Pac. S.-W. I.S.

KILLARNEY. A. Dickson, 1898. *Very hardy.*

Clear, silvery pink, darker in heat; lovely long bud which opens flat; good size, but does not last; fragrant. Continuous bloomer. Good growth; stem seldom deficient. Mildews very badly.

Was originally the best pink rose in Cen. Zones, but was gradually superseded. Lost sight of in England, and not recommended in Australia. This variety gave a number of sports, of which Killarney Queen is the most valuable, being fuller and darker than the original. For decoration or hedges in I.S. districts with dry conditions. [I.S.]

K. OF K. A. Dickson, 1917. *Hardy.*

Solid, intense scarlet; semi-double; much like Red-Letter Day, but with a trace of perfume not found in that variety, and petals hold their shape better. Nevertheless, this rose was placed after the other in the English vote of 1923. Does well in California. Decorative only. Continuous bloomer.

Cen. Pac. N.-W. Pac. S.-W.

LA FRANCE. Guillot fils, 1867. (Mme. Victor Verdier [HP.] × Mme. Bravy, [T.]) *Good hardiness.*

Beautiful bright pink, sometimes with lilac shading, lighter on reverse of petals; fair form; wonderful fragrance. Stem short, but usually strong; of good growth, if given light soil and not overfed. Foliage affected by disease.

Its fragrance is its greatest virtue, but it is hard to grow well and has lost popularity. Recommended by some growers as best on own root in S. Zones. Recommended by Theodore Wirth, Minneapolis, Minn., as blooming throughout the season, with good growth and foliage. Does very well in the lower levels of Idaho. The white sport of this rose, Augustine Guinoisseau, is good in heat. [N. I.S.]

LA TOSCA. Schwartz, 1900. (J. Marot [HT.] × Luciole [T.]) *Extremely hardy.*

Bright silvery pink, with darker center; bud short; flower





PLATE XI. MME. SECOND WEBER, HT. (See page 91.)

loose; medium size; wilts in heat; slight fragrance. Remarkably fine growth and nice stem. Foliage very free from disease.

Owing to lack of substance and petalage, this rose is mainly valuable in the extreme North on account of its great hardiness and growth, and its improvement under cool conditions. Over fifty blooms in Cen. Zone. [N.]

LADY ALICE STANLEY. McGredy, 1909. *Very hardy.*

Deep rose to silvery flesh; bud short; open bloom cupped, lasts well; slight fragrance. Medium growth; good strong stem.

Although it once won the Gold Medal of the National Rose Society in England, Lady Alice Stanley is not quoted in any of the selected lists of the English Annual for 1923. In the American Rose Annual this variety scores heavily in the Middle States, being equal first in number of votes with Radiance. Among the pinks in Pennsylvania it is late coming into full bloom, and gives its greatest number of flowers in July, with a second burst in September, although its total is only barely over thirty. The foliage is lost early by black-spot, but is almost proof against mildew. Strongly recommended by W. C. Wood, of Danville, Ky., in a difficult rose climate.

Cen. Pac. S.-W. I.S. S.-E.

LADY ASHTOWN. A. Dickson, 1904. *Extremely hardy.*

Light salmon-pink, variable; fine form; fair lasting qualities; trace of fragrance. Fair growth. Gives over thirty blooms in Cen. Zone.

Does well in Washington, D. C., for Mr. Gersdorff, when established on own root, with about an equal number of blooms, but comes smaller and lighter in heat, besides opening quickly in extreme heat, with weak neck; sometimes dies back. Always popular in England, and is listed there as pure deep pink. It needs coolness for perfection, and is of exhibition value in the Pac. N.-W. Zone. Its extreme hardiness for an HT. is proved by its northern record as well as by the almost entire lack of winter-killing of any of its wood in the Cen. Zone. Subject to mildew. Recommended for New York state by Dr. Mills.

N. Cen. Pac. N.-W.

LADY MAUREEN STEWART. A. Dickson, 1920.

Blackish scarlet-cerise, reverse solid orange-maroon; double, but flat; fragrant. Foliage very fine.

Test in Pac. N.-W. and Pac. S.-W.

86 ROSES FOR ALL AMERICAN CLIMATES

LADY PIRRIE. H. Dickson, 1910. *Very hardy.*

Deep coppery salmon to apricot-yellow; bud attractive; flower loose and flat; color and form do not last; slight fragrance. Of fine strong growth, but subject to mildew.

Its color has secured its popularity, and in England it was voted equal third for garden cultivation. Gives over fifty flowers in Cen. Zone, less in N. and S. It becomes quickly established; especially recommended for I.-N., with altitude. Among the roses recommended by Robert E. Hughes, of Buffalo, N. Y.
Cen. N.

LADY URSULA. A. Dickson, 1908. *Extremely hardy.*

Flesh-pink, not always clear; fair form, though rather small; lasts well; slight tea perfume. Fine, large, upright growth. Gives over sixty blooms in Cen. Zone.

Does well in Washington, D. C., on own root, as quoted in American Rose Annual by Mr. Gersdorff—for general cultivation, and fair for cutting with long stems. Among the roses recommended by Robert E. Hughes, of Buffalo, N. Y.

N. Cen. I.S.

LAURENT CARLE. Pernet-Ducher, 1907. *Quite hardy.*

Deep crimson-rose; very attractive form, but petalage is very full and substance is only fair, so that under damp conditions this rose does not open well; fine fragrance. Wood sometimes liable to die back. Foliage takes mildew and black-spot slightly. Growth rather small in Cen. Zone, where it gives an average of thirty-one blooms. Does well in S.-E., and Pac. S.-W.

In American Rose Annual vote in 1921 for southern states it scored more points than any other red HT. Recommended as seventh best of any color by National Rose Society of New South Wales.
[Cen. S.-E. Pac. S.-W. I.S.]

LILLIAN MOORE. H. Dickson, 1917. *Hardy.*

Indian-yellow, slightly deeper center; not as hardy as Mrs. Aaron Ward, which it somewhat resembles, but holds its color better, and is becoming popular throughout the South.

Catalogued by Bobbink & Atkins. [S.-E. I.S.]

LIEUTENANT CHAURE. Pernet-Ducher, 1910. *Hardy.*

Velvety crimson-red; fair form; petalage slightly thin, with good substance; fair fragrance. A good rose of nice growth and blooming qualities.
[Cen.]

LORD CHARLEMONT. McGredy, 1922.

Described as a clear deep crimson, with a long, pointed flower, large and full.

Has done well in New South Wales and New Zealand. Recommended for test in Pac. N.-W.

LOS ANGELES. Howard & Smith, 1916. (Lyon Rose $\times$ Mme. Segond Weber.) *Fairly hardy.*

Silvery salmon-pink, shaded golden orange; attractive bud; open flower a trifle loose; slight fragrance; bloom and stem wilt under great heat. Good growth. Foliage mildews slightly under some conditions, also liable to be lost in long seasons. Wood dies back occasionally.

Won Gold Medal, Bagatelle Gardens, Paris. Was equal twenty-fourth in English Rose Annual vote of 1922 for use in general garden cultivation; equal seventh in 1923. Scored high in American Rose Annual vote in central and western states. Remarkably fine in coastal regions without too great extremes. Twenty-five blooms in Cen. Zone; profuse in Pac. S.-W. and Pac. N.-W. Indispensable where adapted. Recommended in Utah questionnaire. Reports vary as to hardiness, but it is so fine in every way that it is well worth careful protection, and if such is given should do well in the southern parts of the Cen. Zone, as well as in the zones noted.

Cen. (southern parts). Pac. N.-W. Pac. S.-W.

LULU. Easlea, 1919.

Deep flame-color to orange-pink; bud exceptionally long, petalage thin. Foliage mildews. Growth good. Must be cut early and does not last.

This rose is catalogued by Henry A. Dreer, Philadelphia, and may be regarded as hardy in that section of Pennsylvania.

Pac. N.-W. Pac. S.-W.

MABEL DREW. A. Dickson, 1911. *Hardiness varies.*

Deep cream, center canary-yellow; beautiful and attractive bud and open flower; very large size and lasts very well; perfumed. Tall but scraggly growth; stem long and strong. Foliage quite good.

This is an exhibition rose which was equal fifteenth for such use in 1923 English Rose Annual vote and fourth of the yellows. The growth is poor in Cen. Zone; foliage fair; stem frail, giving ten blooms.

[Pac. N.-W.]

MABEL MORSE. McGredy, 1922. *Hardy.*

Clear golden yellow; medium size, perfumed.

Described in English Annuals of 1921 and 1922, and won the English Rose Society's Gold Medal in the latter year. Quoted as being free from mildew and black-spot. Recommended for bedding and massing. Young foliage described as very attractive. In California has twenty-two petals; deep canary-yellow in bud, which is rather small; small growth, of low prostrate, almost creeping habit; holds foliage well; recommended for low bushes, and with cutting value. [Pac. N.-W. Pac. S.-W.]

MILDRED GRANT. A. Dickson, 1901. *Very hardy.*

Silvery white in color, with shell-pink edges; lovely form; very large in size; lasts well. Bushy but short growth; nice stem. Foliage mildews.

Good exhibition rose. Voted equal seventeenth in England for such use in 1923. Has HP. characteristics. Adapted to the Pac. N.-W.

MISS LOLITA ARMOUR. Howard & Smith, 1919. *Hardy.*

Coral to copper; nice bud, opening quite well; lasts fairly well; medium size; slight fragrance. Foliage beautiful. Growth good; stem fair to good.

A beautiful rose. Scored well at Portland, Ore., and recommended for the Pac. S.-W. [Pac. N.-W. Pac. S.-W.]

MME. ABEL CHATENAY. Pernet-Ducher, 1894. (Dr. Grill $\times$ Victor Verdier.) *Very hardy.*

Carmine-rose, shaded salmon, sometimes lighter; form quite good; small, but lasts; slight fragrance. Growth often lop-sided.

A rose that has always been well liked, and yet, owing to its small size, erratic growth, and tendency to mildew, its popularity is surprising. Listed in 1923 English Annual as equal thirteenth for general garden cultivation, and esteemed in New South Wales by the National Rose Society. Is of fair cutting value only. A. J. Keen, Phoenix, Ariz., reports this as a principal variety. The climbing sport is larger than the dwarf in the Pac. S.-W.

N. Pac. S.-W. S.-E. Pac. N.-W. I.S.

MME. BUTTERFLY (sport of Ophelia). E. G. Hill, 1918. *Hardy.*

Soft flesh, shaded rose; beautiful spiral bud; attractive open flower of good size; lasts quite well; very fragrant. Stem very good. Foliage good.

Hazlewood, of Australia, prefers Mme. Butterfly to Ophelia.

Should be planted in partial shade in hot climates. In California coast areas does not discolor as quickly as its parent, and must be given the preference. Recommended for Utah in a questionnaire sent out by the Salt Lake City Chamber of Commerce. Does well for Holden's Nursery, at West Palm Beach, Fla., on Multiflora stock. Is reported as giving long blooming season in Cheyenne, Wyo. [All zones.

MME. CAROLINE TESTOUT. Pernet-Ducher, 1890. (Mme. de Tartas × Lady Mary Fitzwilliam.) *Extremely hardy.*

Satin rose, with brighter center; of delightful fragrance, soon lost; opens quickly, with cupped form. Only fair growth in Cen. Zone, but remarkable in Pac. N.-W. Foliage good.

Superseded in the East, as it has not enough bloom for garden decoration and is only fair for cutting. The cool Pac. N.-W. gives blooms of finer quality and strength of stem for cutting value. Does well on own root in Pac. N.-W. also. Reported by Mrs. C. H. Morse, of Charleston, N. H., as giving continued bloom through season but subject to black-spot. Reported as giving long blooming season in Cheyenne, Wyo.

N. (with protection). Pac. N.-W.

MME. CHARLES LUTAUD. Pernet-Ducher, 1912. *Fairly hardy.*

Golden chrome-yellow, orange center, paler edges; remarkably beautiful bud and open flower; medium size; lasts well; little fragrance. Stem strong. Foliage fine, though often lost in long seasons.

Needs equable climate without too great extremes. This rose holds color and form better than any other yellow under severe heat, and does not discolor, open flat, or ball.

S.-E. Pac. N.-W. Pac. S.-W. I.S.

MME. JULES BOUCHE. Croibier, 1911. *Very good hardiness.*

White to flesh-blush, sometimes peach-cream center; long bud; substance somewhat thin; medium to small; lasts but may discolor slightly; slight perfume. Growth bushy and very fine; stem long but small and wilts in heat. Mildews in bad conditions. Holds foliage tenaciously in long seasons.

This variety gives more flowers than any other cutting white HT., supplying over seventy in Cen. Zone. Not noted in American or English Rose Annual vote of 1923, nevertheless, is a fine rose and succeeds except in excessive damp or extreme heat. Does better in Cen. Zone than Frau Karl Druschki. [Cen.

90 ROSES FOR ALL AMERICAN CLIMATES

MME. JULES GROLEZ. P. Guillot, 1897. (Triomphe de l'Exposition [HP.] × Mme. Falcot [T.]) *Very hardy.*

Bright China rose, not always clear—blues in heat; nice bud; center held quite well; fair size only; lasting; fragrant. Foliage practically perfect, and holds. Bushy but not tall growth in Cen. and N. Zones; stem long with fair strength.

Shows distinct Tea characteristics, especially in its retention of foliage, while its hardiness makes it useful where late frosts are encountered. Fair for cutting and requires little attention. Gives good results for George R. Mann, Little Rock, Ark., blooming continuously without foliage troubles. Reported by Miss Creighton, of west coast of Florida, as being very fine and continuous. [S.-E. I.S.]

MME. JENNY GILLEMOT. Pernet-Ducher, 1905. *Hardy.*

Deep chrome-yellow to golden yellow; beautiful spiral bud, opening well; medium size; lasting; slight fragrance. A weak grower, giving less than twenty blooms in Cen. Zone. Wonderful bloom for cutting. Foliage leathery and dark, resisting mildew. Popular throughout the S. Zones. [S.-E. I.S.]

MME. MARCEL DELANNEY. Leenders, 1916. *Fine hardiness.*

Clear, soft silvery rose, suffused with pale lilac; form opens cupped; very large size; lasting; lovely perfume. Bushy growth and strong stem. Resistant foliage. Has HP. characteristics. A shy bloomer, but very good cutting rose. Good in Cen. and Pac. N.-W. Zones. [Cen. Pac. N.-W.]

MME. MAURICE DE LUZE. Pernet-Ducher, 1907. (Mme. Abel Chatenay × Eugène Fürst.) *Extremely hardy.*

Deep rose-pink—blues in heat; attractive in form but not perfect; fine fragrance. Gives forty-five blooms in Cen. Zone.

Has never been largely planted, but deserves better support. Nice garden rose with tendency to mildew, and not an exhibition variety. [N. Cen.]

MME. MELANIE SOUPERT. Pernet-Ducher, 1905. *Fairly hardy.*

Melon-yellow, suffused carmine to deep cream—holds color in heat by reason of its great substance; beautiful bud, opens loose; slight fragrance. Stems long and strong, but a poor grower. Foliage almost immune to mildew, but lost early. Twenty-five blooms in Cen. Zone. Of exhibition value in Pac. N.-W.

Cen. S.-E. Pac. N.-W.

MME. RAVARY. Pernet-Ducher, 1899. *Extremely hardy.*

Deep yellow; form somewhat globular, opens a trifle loose. Rather small growth.

Gives about thirty-six blooms in Cen. Zone, and is quoted as giving eighteen blooms for Mr. Egan, near Chicago, in 1916. Quoted by a number of growers as quite hardy in the North. Most valuable in Pac. N.-W. [N. Pac. N.-W.]

MME. SEGOND WEBER. Soupert and Notting, 1908. (Antoine Rivoire $\times$ Souvenir de Victor Hugo.) *Hardiness good.*

Rosy salmon, with cream-flesh edges; very fine form; lasting; slight fragrance. Foliage slightly affected by mildew and black-spot; holds fairly well. Fair growth; stem long and strong.

Gives close to fifty blooms in Cen. Zone, and is a splendid cutting variety. On the California coast is much larger than in the East, but not so fine in substance, nor is the bud so spiral in form. Gives more perfect blooms than almost any other HT. in Cen. Zone, and should be more widely planted. Recommended by Hazlewood Bros., of New South Wales. One of the roses which has improved greatly on Multiflora stock in the East; has been overlooked for less worthy sorts.

Cen. Pac. N.-W. Pac. S.-W. S.-E.

MME. WAGRAM, COMTESSE DE TURENNE. Bernaix, 1895. *Hardy.*

Satiny rose, suffused flesh-pink, sometimes muddy.

Fine rose in heat. Gives fifty blooms in Cen. Zone. Noted by W. C. Blanks, of San Angelo, Texas, as growing to size of a large semi-climbing rose in his section. [S.-E. I.S.]

MRS. AARON WARD. Pernet-Ducher, 1907. *Most hardy.*

Indian-yellow, occasionally washed light rose—bleaches badly; good form, but trifle short; slight fragrance. Compact, upright growth; good stems. Foliage very good.

Should be grown in N. Zone on account of its hardiness; also good in Cen. Zone, where it gives forty blooms. Received most votes of any yellow in New England States in American Rose Society's 1921 referendum. Mrs. C. H. Morse, Charleston, N. H., reports this as giving continuous bloom through season, but subject to black-spot. Recommended for Utah in a questionnaire sent out by the Salt Lake City Chamber of Commerce. Gives over thirty blooms for Mr. Egan, near Chicago. Recommended by Westover Nurseries, of Clayton, Mo. Is variable in color in some locations. [N. Cen.]

92 ROSES FOR ALL AMERICAN CLIMATES

MRS. ANDREW CARNEGIE. Cocker, 1913. *Hardy.*

White, faintly tinged yellow, sometimes darker; beautiful form; large size; needs dryness and heat to open well; lasting. Foliage good. Growth fair in Cen. Zone, greater under more equable conditions.

This rose has been reported as doing especially well in Lewiston, Idaho, where the elevation is less than 1,000 feet. Needs a dry climate without cold extremes. [I.S.]

MRS. ARTHUR ROBERT WADDELL. Pernet-Ducher, 1908. *Hardy.*

Reddish salmon, reverse rosy scarlet, fading to cream when open; attractive bud; semi-double flower of medium size; does not last. Foliage fair. Poor stem and weak neck; spreading and bushy growth.

Originally in first sixteen for Cen. Zone, but displaced later on account of lack of value for cutting and for fading on bush as garden decorative. Needs cool climate for perfection. Especially recommended by W. C. Wood, of Danville, Ky., where it thrives after late frosts. Mrs. Waddell shows Fœtida blood. Not as good as Mrs. Frank Bray in Pac. S.-W. [I.S.]

SEEDLING No. 3. Introduced by Miller Floral Co., Salt Lake City, Utah. (Will probably be disseminated as Mrs. Barron.) *Hardy.*

Bright pink, two-toned, opening lighter; very large flower of forty petals; very fine.

Introducers' description has held true of this rose as tested in California and is as follows: "Free grower; fine stem; even foliage; large size," to which should be added that it holds color well in heat. Introducers state that this rose has done well in tests in the East. [Cen. Pac. N.-W. Pac. S.-W.]

MRS. CHARLES BELL. Mrs. Charles Bell, 1917. *Hardy.*

A sport of Radiance, of lighter and softer pink, verging on salmon. Described by Bobbink & Atkins as a constant and steady bloomer. Not thoroughly tested everywhere, but of great promise. N. (southern parts). Cen. S.-E. Pac. S.-W. I.S.

MRS. CHARLES LAMPLOUGH. McGredy, 1920.

Lemon-chrome; very large, on extremely long stem; of wonderful refinement and lovely color. Foliage slightly susceptible to mildew and black-spot.

Won the Gold Medal of English Rose Society and was



PLATE XII. OPHELIA, HT. (See page 96.)



equal first in the English Rose Annual's vote for exhibition varieties in 1923. In Pac. S.-W. seacoast it balls somewhat in early spring, and although of light color should be grown in a situation without shade in this district. Frau Karl Druschki, which was also equal first as an exhibition rose in 1923, is a much more prolific bloomer and more dependable for general cultivation. Noted by Mr. Eisele, of Henry A. Dreer's, Philadelphia, as being hardy in that section.

Pac. N.-W. Cen. Pac. S.-W. I.S. S.-E.

MRS. DAVID JARDINE. A. Dickson, 1908. *Extremely hardy.*

Light salmon-pink; fair form; lasting; perfumed. Foliage good. Very fine growth; fair stem.

Gives over forty blooms in Cen. Zone, and should be valuable in I.S. on account of its growth and ability to retain foliage. A small rose, of little value for cutting. [I.S.]

MRS. DUNLOP-BEST. Hicks, 1916. *Hardy.*

Reddish apricot to coppery yellow at base; nice buds, though short; attractive open flower of fair size; holds color but is small in heat; slight fragrance. Long, strong stems as a rule; fair growth. Foliage attractive Tea color when young, and seldom mildews, besides holding well.

Thirty-five flowers in Cen. Zone. Recommended by E. M. Rosenbluth, of Pennsylvania, as best yellow.

Cen. Pac. N.-W.

MRS. E. T. STOTESBURY. Towill, 1918. (Seedling [Joseph Hill × My Maryland] × Milady.) *Quite hardy.*

Solid, medium pink; long spiral bud, opening well. Good stem, growth, and foliage.

Highly recommended by Hazlewood, of New South Wales; also does well in New Zealand. [S.-E. Pac. S.-W.]

MRS. FRANK BRAY. A. Dickson, 1912. *Hardy in Cen. Zone.*

Bud orange-pink; flower cream to light apricot, pink center; nice bud, but opens thin. Good to very good growth, but short stems.

Gives three dozen blooms in Cen. Zone. In southern California this rose does well in shade, and is to be preferred to Safrano or Mrs. Arthur Robert Waddell there. Blooms constantly. Foliage more immune to mildew than Safrano; in extreme heat lacks substance. Decorative only. [S.-E. Pac. S.-W.]

94 ROSES FOR ALL AMERICAN CLIMATES

MRS. GEORGE MARRIOTT. McGredy, 1918. *Hardy*.

Deep cream and pearl, suffused rose and vermillion.

Won Gold Medal of National Rose Society of England, and equal tenth in English Rose Annual's 1923 vote for exhibition and garden combined. Not tested. [Pac. N.-W.]

MRS. GEORGE SHAWYER. Lowe & Shawyer, 1911. *Hardiness fair*.

Clear rose at its best, but often muddy; fine form. Foliage mildews very badly. Fair growth and stem. On account of its lasting qualities and freedom from mildew under dry heat, it is a good rose for I.S. [I.S.]

MRS. H. R. DARLINGTON. McGredy, 1920. *Hardy*.

Creamy yellow to light cream. Stands heat well for its color and does not ball. A combination rose for garden and exhibition. Medium growth only.

Stood equal thirteenth in 1923 English vote as exhibition bloom. Does well for Hazlewood, of New South Wales, and is strongly recommended, although in that country it is lighter than in England, on account of great heat; may be expected to come lighter with us in heat. Not thoroughly tested. Noted by Henry A. Dreer's, Philadelphia, as being hardy.

Cen. Pac. N.-W.

MRS. HAROLD BROCKLEBANK. A. Dickson, 1907. *Fairly hardy*.

Soft cream-flesh, center lovely primrose-yellow, sometimes with splashes of lightest rose in late seasons; long, beautiful spiral bud; flower with pointed center; good size and lasts well; fragrant. Foliage of good substance, little mildew, sometimes lost. Growth scanty; stem usually long and strong.

The color of this rose is almost perfection, being distinct and without muddiness, and for cut-flowers it is very attractive, but its shyness and need of special care has hurt its popularity. Dr. Huey grows this in one row, near Philadelphia, and his plants totaled close to forty blooms.

Cen. Pac. N.-W. Pac. S.-W.

MRS. HENRY MORSE. McGredy, 1919. *Hardy*.

Bright rose, darker shadings; beautiful spiral bud, holding high center when open; good size; lasting; very free; thirty petals; fragrant. Tall but somewhat spindly growth, with good stem. Foliage mildews.

Stood equal seventh in England in 1923 as exhibition bloom;

equal fourteenth for general garden cultivation. From records would seem to mildew in moist heat more than damp coolness, but would do better still in dry climates. A rose well worth test, particularly adapted to Cen. Zone conditions with altitude. Highly recommended by Bobbink & Atkins.

Cen. Pac. N.-W.

MRS. JOSEPH H. WELCH. McGredy, 1911. *Very hardy*.

Brilliant rose-pink; very large, semi-double blooms. Splendid growth and foliage.

Its greatest fault in Cen. Zone is short and weak stem and the fact that it wilts quickly. In Pac. N.-W. is very much better in these characteristics, and gives many more blooms. Decorative.

N. Pac. N.-W.

MRS. REDFORD. McGredy, 1919. *Hardy*.

Light orange-salmon; twenty petals. Foliage good. Vigorous growth. Very free bloomer.

[Pac. N.-W.]

MRS. S. K. RINDGE. Howard & Smith, 1919. (Rayon d'Or × Frau Karl Druschki.) *Hardy*. Classed as an HT., but with a strain of Brier blood.

Clear chrome-yellow to salmon-pink; long, pointed bud; opens loose and fades in extreme heat. Foliage seldom shows mildew. Good grower and fine bloomer. Decorative.

Cen. Pac. N.-W. Pac. S.-W.

MRS. WILLIAM C. EGAN. Howard & Smith, 1922. *Very hardy*.

Two-tone shade of soft light pink, with golden line at base of petals.

Gave fifty blooms to the plant in Chicago when tested by Mr. Egan. This well-known rosarian is most careful in his testing, and the fact that the rose is named for his wife is good evidence of its reliability in his section. Has been very pleasing to J. Horace McFarland, at Harrisburg, Pa., and has also done well in test made by Hazlewood, of New South Wales. It would seem that this is a new variety which could be planted without further test. Is not only a good bedding rose, but also of cutting value. Try in S. Zones.

N. (southern parts). Cen. Pac. N.-W. Pac. S.-W.

OLD-GOLD. McGredy, 1913. *Very hardy*.

Vivid reddish orange, with rich coppery red and apricot shadings; semi-double; fair size; does not last; especially fragrant.

Nice growth in Cen. Zone. Foliage good. This rose is much hardier than Irish Fireflame and of much the same color. Recommended for Cen. and I.S. Zones because it comes into bloom late and survives spring frosts well. [Cen. I.S.]

OPHELIA. W. Paul, 1912. *Very good hardiness.*

Salmon-flesh, deepening toward center to light orange-salmon; bud perfect; open flower good; medium size, and very regular under all conditions except extreme heat; fragrance remarkably fine. Foliage mildews slightly and may be lost by black-spot. Disappointing growth in Cen. Zone, but stem very fine.

The best cutting rose among the light shades, its combination of soft pearly coloring, form, and fragrance being unequaled. Supposed to be surpassed by its sport, Mme. Butterfly, but differences are very slight, although some observers claim better growth and deeper shade for the sport, and in California, Mme. Butterfly does not discolor so easily. In England, Ophelia stands equal fourth for garden cultivation, and holds same position as a standard. In American Rose Society's 1923 vote it was the most popular dwarf on the list for all sections of the country. Gives over forty blooms in Cen. Zone. Ophelia has given the sports Ophelia Supreme, Golden Ophelia, and Oregon Ophelia, as well as Mme. Butterfly, all of which are classed as slightly different in color. In extreme heat, Ophelia blasts in the bud; this is true occasionally in the Pac. S.-W. and is confirmed by letter from F. E. Lester, of Messila Park, N. Mex. This rose is noted as the best light-colored rose at Lookout Mountain, Tenn., by Mrs. W. B. Miller, where it gives fine bloom throughout the season from May to November. Dr. E. M. Mills, of Syracuse, N. Y., President Syracuse Rose Society, reports long period of blooming, fall bloom, and good number of cut-flowers. Reported by Miss E. M. Ellsworth, of Omaha, Neb., as fading and subject to black-spot. Recommended for west coast of Florida by Miss Creighton. Noted as doing well for E. L. Crane, of Humboldt, S.-E. Neb. [All zones.]

PADRE. B. R. Cant, 1921.

Orange-vermilion base, above deep shrimp-pink; twenty petals, opens loose. Large, strong growth; free bloomer. Somewhat shy in foliage but seldom mildews. Has the fault of weak neck, although growth is upright. Decorative only.

Pac. N.-W. Pac. S.-W.

PAX LABOR. Chambard, 1918. *Hardy in Cen. Zone.*

Pale yellow, edged carmine; bud short; flower flat, very large and full—fifty petals, many small; holds its center but discolors in heat. Vigorous growth. Good foliage.

Cen. Pac. S.-W. I.S. S.-E.

PHARISAER. Hinner, 1903. *Very great hardiness.*

Silver-flesh, suffused light salmon-rose, deeper center; fair length in bud; bloom opens somewhat loose but holds its center; in size above average and lasts well for its petalage; fragrance slight. Only fair foliage, but holds in long seasons. Fine, tall, fairly bushy growth, with long stem of rather small calibre, inclined to weakness; continuous bloomer.

Undoubtedly especially adapted for cool climates without heat extremes. Prune high. Among the roses recommended by Robert E. Hughes, of Buffalo, N. Y. [N. Cen. Pac. N.-W.]

PREMIER. E. G. Hill, 1918. (Ophelia seedling × Mrs. Charles E. Russell.) *Hardy.*

Rich dark pink—blues badly in heat; full; good form; blooms usually borne singly; fragrant.

Has done exceptionally well for Mrs. Grant S. Hager, of Grafton, N. Dak. (Grafton is situated in the Red River Valley, which has rich alluvial soil.) [N. (with protection).]

PRESIDENT TAFT. McCullough, 1908. *Hardy.*

Clear salmon-pink, but varying—holds color in heat; nice shape in bud and opens well; small to medium size; fair substance; mild fragrance. Very fine foliage which does not fall. Growth tall but spindly in Cen. Zone, bushier in S. Zones, with good stem.

Has been overlooked on account of its small growth and shy blooming in Cen. Zones, but in southern districts it greatly improves in both these characteristics. On account of its lasting and beautiful foliage is most desirable, especially as it withstands late frosts. Catalogued by U. S. Nursery Co., of Roseacres, Miss.; also recommended by the Huntsville Nurseries, Alabama. S.-E. Pac. S.-W. I.S.

PRINCE DE BULGARIE. Pernet-Ducher, 1902. *Very hardy.*

Deep rosy flesh, shaded salmon, occasional yellow tints; good form. Good growth and foliage. Fair for cutting.

Only valuable in the North. Commended by Dr. Mills. [N.]

98 ROSES FOR ALL AMERICAN CLIMATES

QUEEN OF FRAGRANCE. W. Paul, 1915. *Very hardy.*

Bright shell-pink, tipped with silver; nice bud, which opens a trifle loose; large in size; fairly lasting; exceptional fragrance. Fine foliage. Fine growth and stem.

This variety was catalogued by George H. Peterson, of New Jersey, which is a recommendation in itself for that section. It is a good bloomer, and it is surprising that it has not become more popular. [Cen.]

RADIANCE. J. Cook, 1908. (Enchanter $\times$ Cardinal.) *Extremely hardy.*

Dark salmon-pink to silver-flesh; fair in bud; open flower somewhat cupped; lasts well; fragrant. Foliage little affected by disease and holds in long growing seasons. Remarkably strong growth and good stem—sometimes weak neck.

Gives over fifty blooms in Cen. Zone, and exceeds this in Mr. Gersdorff's tests, in Washington, D. C., doing well on own-root there. Scores heavily in American Rose Annual vote except in the Pac. N.-W., where its form is surpassed by other varieties. In other zones is best all-round pink for general garden cultivation, with fair cutting value, and especially fine in warm conditions. Severe damp and cold wind discolors outer petals. Placed first by the National Society of New South Wales. Reported free of mildew and black-spot by the Chase Nursery Co., of Chase, Ala. Does well on Multiflora stock at West Palm Beach, Fla., for Holden's Nursery. Dr. Mills, of Syracuse, N. Y., reports that the variety has long season, fall bloom, good number of flowers, large growth, and is of good cut-flower value. Recommended for west coast of Florida by Miss Creighton. Noted as doing well for E. L. Crane, of Humboldt, S.-E. Neb. Recommended by West-over Nurseries, of Clayton, Mo. Considered by J. H. McFarland, Editor of American Rose Annual, to be, with its sports (Red Radiance and Mrs. Charles Bell), the best American-raised garden HT.

N. (southern parts). Cen. S.-E. Pac. S.-W. I.S.

RED-LETTER DAY. A. Dickson, 1914. *Hardy.*

Glowing scarlet-crimson—very brilliant and intense color; bud long and pointed; open flower, loose, few petals; good size and color; no fragrance. Foliage seldom has mildew, but is susceptible to black-spot. Upright growth; stems thin but fairly strong.

A splendid bedding rose, but with little or no cutting value.

Stands equal fourth in English Rose Annual's 1923 voting-lists of roses for general garden cultivation. Very continuous bloomer—forty blooms in Cen. Zone and forty-seven with Mr. Gersdorff on own roots, Washington, D. C. (K. of K. is much the same in color, has some fragrance, and is possibly, a better grower, but Red-Letter Day has so far remained in the lead in the English voting-list.) [Cen. Pac. N.-W. Pac. S.-W.]

RED RADIANCE (sport of Radiance). Gude Bros., 1916; also A. N. Pierson, 1916. *Very hardy.*

Solid medium to deep red, lighter in heat; of good cupped form, without being an exhibition rose; some fragrance. Vigorous growth. Good foliage.

Can be grown in all sections. In the American Rose Annual's referendum, one of the best dozen for central and southern sections. Reported free of mildew and black-spot by Chase Nursery Co., of Chase, Ala. Dr. Mills, of Syracuse, N. Y., reports that this rose has long blooming season, good number of blooms, large growth, of cut-flower value. Recommended for west coast of Florida by Miss Creighton. Holden's Nursery, West Palm Beach, Fla., reports this as blooming all year, with very slight mildew and very rare black-spot. Recommended by Westover Nurseries, of Clayton, Mo. The Gude Bros.' sport is considered the darker.

N. (southern parts). Cen. Pac. S.-W. S.-E. I.S.

REV. F. PAGE-ROBERTS. B. R. Cant, 1921. *Hardy.*

Two-tone flame-color outside on outer petals, yellow-cream inside, apricot in center—fades in full bloom to deep yellow-cream, with orange reverse; lasts well; perfumed slightly. Foliage good. Stem fair. Very fine bloomer. Mildew-proof.

Recommended by Frank C. Mason, of New Zealand, and Hazlewood Bros., of New South Wales. An acquisition for exhibition and garden purposes. [Pac. S.-W.]

RHEA REID. E. G. Hill, 1908. (American Beauty × red seedling.) *Hardy.*

Cerise-crimson; fragrant; form varies—small under hot conditions, but with very fine mildew-proof foliage and nice growth.

S.-E. Pac. N.-W. Pac. S.-W. Cen. (in seacoast section).

RICHMOND. E. G. Hill, 1905. (Lady Battersea × Liberty.) *Very hardy.*

Pure red-scarlet; form varies in Cen. and S. Zones, where it gives close to fifty blooms; very small in heat and its form is flat;

100 ROSES FOR ALL AMERICAN CLIMATES

fragrant. Quite good in Pac. N.-W. Discarded in Washington, D. C., by Mr. Gersdorff, using own-root stock. In Washington State and Oregon this rose gives well over fifty blooms. Recommended by Westover Nurseries, of Clayton, Mo. [Pac. N.-W.]

ROBERT HUEY (not Dr. Huey, HW.) A. Dickson, 1911. *Extremely hardy for its class, wood in Cen. Zone living to 3 feet after winter.*

Warm carmine-cerise, with wire edges of delicate pink—blues under heat; perfume mild. Foliage lost early, liable to black-spot in long seasons. Named by Dr. Huey in memory of his older son. Bloom is beautiful, without being an exhibition flower, and is recommended for N. Zone.

Introducers have dropped this variety from their catalogues, evidently because its great hardiness is not required in England. Gives thirty blooms in Cen. Zone. Bobbink & Atkins, of Rutherford, N. J., and M. H. Walsh, of Woods Hole, Mass., are firms who catalogue this rose. [N.]

ROBIN HOOD. E. G. Hill, 1912. *Very hardy.*

Bright rosy scarlet; very good form but not for exhibition; fragrance good. Disease-resistant foliage. Fine growth; nice stem.

This is a good cutting rose, as it lasts well. Forty-two blooms in Cen. Zone. [Cen. S.-E. Pac. S.-W.]

ROSE MARIE. Dorner, 1918. (Hoosier Beauty × Sunburst.) *Hardy.*

Bright rose-pink, nearly solid color; fine shape; often quite large; fragrant. Foliage almost free of mildew. Growth and stem both good.

Thirty-one flowers in Spokane from record of W. L. Langbehn, during season of 1922, from planting of May, 1922, the variety being his third choice. Also mentioned by W. C. Wood, of Danville, Ky., as doing well with him, and by A. J. Keen, of Phoenix, Ariz., who considers it the coming pink. Strongly recommended for southern California, and for Washington State by W. E. Sherbrooke, of Kirkland, and for New Mexico by F. E. Lester, of Messila Park, who believes that when better known this rose will take first place as the best pink as it had no mildew in 1923, no black-spot, and does not lose its foliage early. Recommended by Frank C. Mason, of New Zealand, and Hazlewood Bros., of New South Wales. Bloom wonderful in Holden's Nursery, West Palm Beach, Fla., but did not do well on Ragged Robin.

Pac. N.-W. Cen. S.-E. I.S. Pac. S.-W.



PLATE XIII. PHARISAER, HT. (See page 97.)



SENATEUR MASCURAUD. Pernet-Ducher, 1909. *Hardy in Cen. Zone.*
Cream-yellow, yolk-of-egg center.

Gives over thirty blooms in Cen. Zone, but a small grower there yet having nice stems and good foliage. In California a better grower, holding form and color well in heat, and strongly recommended.
[Cen. Pac. S.-W.]

SOUVENIR DE H. A. VERSCHUREN. Verschuren, 1922. *Hardy.*

Orange-saffron, possibly more even than Sunburst; twenty-four petals; perfume light. Foliage fine. Good growth and stems.

Fred H. Howard, of Los Angeles, prefers this to Sunburst. Recommended by J. H. Nicolas, of Indianapolis, also by Mr. Eisele, of Henry A. Dreer's, Philadelphia, for his section.

Cen. Pac. S.-W.

SOUVENIR DE MARIA DE ZAYAS. Soupert & Notting, 1906. Seedling of Papa Gontier. *Hardy.*

Deep carmine; very fine form; fragrant. Foliage especially good, lasting well in hot climates. A rose almost up to exhibition form.
[Cen. S.-E. I.S.]

SOUVENIR DU PRESIDENT CARNOT. Pernet-Ducher, 1894. *Very hardy.*

Silver-flesh, with clear shell-pink center; oval and very full bud; beautiful open flower, with many petals; quite large and lasts well in color and shape; trace of mild fragrance. Dark, leathery foliage, seldom diseased, but does not always hold in long seasons. Uncertain growth, with long but not strong stems.

Gives over thirty blooms in Cen. Zone. No longer popular, nevertheless, its clear and lovely color is distinct and it is often a fine cut bloom.
[N. (southern parts). Cen.]

SUNBURST. Pernet-Ducher, 1912. *Fairly hardy.*

Cadmium-yellow, with darker yellow center, verging on saffron—fades in heat and wilts somewhat; form fair in bud but opens quickly; very slight perfume.

Not hardy in Cen. Zone. The Pac. S.-W., near the coast, uses this rose and secures very good blooms. Recommended for Utah in questionnaire sent out by Salt Lake City Chamber of Commerce; also, on own roots, for Washington State, by W. E. Sherbrook, of Kirkland. Miss E. M. Ellsworth reports this as winter-killed in Omaha, Neb. Reported as continuous by Miss Creighton, of west coast of Florida. Recommended by Westover Nurseries, of Clayton, Mo.
[Pac. N.-W. Pac. S.-W. S.-E.]

102 ROSES FOR ALL AMERICAN CLIMATES

WALTHAM SCARLET. W. Paul, 1914. *Very hardy.*

Crimson-scarlet—beautiful color; single. Fine growth; good stem. Gives seventy blooms in Cen. Zone.

N. Cen. Pac. N.-W.

WARRIOR. W. Paul, 1906. *Hardy.*

Blood-red; bud long; semi-double flower of good size but does not last. Good foliage. Fair growth.

Much on order of Papa Gontier, but hardier. Recommended by National Rose Society of New South Wales among first eighteen for garden, and esteemed there as a winter bloomer.

S.W. I.S. (early and late seasons).

W. FREELAND KENDRICK (originally called Bloomfield Endurance).

Thomas, 1920; intro. by Bobbink & Atkins. (Aviateur Blériot [W.] × Mme. Caroline Testout [HT.]) *Extremely hardy.* Listed as an HT. on account of growth and continuous flowering.

Silver-white, with peach-blush center; globular bud which opens to cupped form; medium size; lasts well; slight fragrance. Very good foliage. Fine growth and good stem.

A hardy everblooming pillar or decorative rose of only fair value for cutting but with fine lasting qualities. Won Silver Medal at International Test-Garden, at Portland, in 1919, for second best rose for general outdoor cultivation, and first for best rose of same type, produced by an amateur. Gave one hundred and eighty-nine blooms during this test, and scored 94 per cent. Balls in cold dampness. (May be secured from Bobbink & Atkins, Rutherford, N. J.)

Cen. Pac. N.-W. Pac. S.-W. I.S.

WILLIAM F. DREER. Howard & Smith, 1920. *Hardy.*

Golden yellow, shaded peach and old-rose; fine form; holds color and form quite well in heat; fragrant. Nice grower, with mildew-resisting foliage, somewhat liable to black-spot. Quite a fine continuous bloomer, with stems of fair strength, but weak neck in heat; very fine during average conditions. A very decided acquisition.

[Cen. Pac. N.-W. Pac. S.-W.]

WILLIAM SHEAN. A. Dickson, 1906. *Hardy in Cen. Zone.*

Clear, silvery pink; of great size for an HT. and of fine form, with beautiful exhibition bloom. Growth is sometimes unbalanced and foliage is often poor. For collection or exhibition only, but very fine at its best.

[I.S.]

WINNIE DAVIS. Nanz & Neuner, 1900. (Kaiserin Auguste Viktoria
× Mrs. W. J. Grant.) *Fair hardiness.*

Salmon-pink center, cream-flesh edges; not quite as good in form as Clara Watson.

Recommended by F. E. Lester, of Messila Park, N. Mex., as having been grown by him for fifteen years, and is a continual bloomer. [Pac. N.-W. I.S.]

THE PRUNING OF HYBRID TEA ROSES

The method of pruning the Hybrid Teas is much the same as that used for the Hybrid Perpetuals in the spring for the Northern and Central Zones.

It might be said that, for general purposes, the Hybrid Teas should be treated like the Hybrid Perpetuals in the North and like the Teas in the South, with a compromised method in between. Here again this class seems to partake of the ways of its parents and flourishes if so cultivated.

The only difference is that the Hybrid Tea wood is smaller in caliper than the Hybrid Perpetual, and it is pruned to a lesser number of eyes—on weak canes to only one or two eyes—while it is usually advisable to cut back to at most two eyes on strong laterals* and to leave those only on very strong-growing kinds. For exhibition blooms, cut out all laterals.

Exceptionally strong growers, such as Radiance, or Hybrid Teas with Hybrid Perpetual character-

*A "lateral," or a side branch, is a shoot of the current year growing from the side of an earlier and stronger shoot of the same season.

istics of growth, may be pruned to seven eyes in the Central Zone.

Decorative Hybrid Teas, such as Gruss an Tep-litz and Lady Ursula, may be pruned still higher.

In all pruning, the theory is that the fewer growths the more sap to each bloom, and the more growths the less sap, and consequently the less perfect individual blooms.

For exhibition, the same rules apply to Hybrid Teas as to Hybrid Perpetuals.

In the Pacific Northwest, on account of greater growth, more eyes may be left in spring pruning, and, for garden decoration, many varieties may be pruned high—otherwise the system is the same.

In the Southern Zones there will also be greater growth than in colder districts, and less winter-killing; therefore, in ordinary cultivation, when exhibition flowers are not expected, the larger plants obtained by high pruning have many advantages and are recommended. Cut out dead wood, balance lop-sided bushes, thin weak and crowded growths, but leave the main canes of sturdy, upright growers from 2 to 3 feet high—eventually higher on old plants. Laterals of strong growth may be retained, and this aids, in long growing seasons, in giving more blooms. Under such treatment it will be found that roses of fair

cutting value will be obtained, and the plant will do better than if pruned too hard, especially where a forced dormancy is necessary for rest on account of lack of cold in winter.

A fine, large bush may eventually be secured by this method—several times as large as its sister of the same variety which undergoes winter-killing frost. On such a plant, strong shoots from the base will supply as fine flowers as are produced on the smaller northern roses pruned by the five-eye pruning system, while, for decoration, the southern plant will give many more blooms.

In the Southern Zones, the spring pruning-time will vary—in California it is due in January—and there must be a second pruning each year—after the withholding of water in the summer and the forced dormancy from such treatment. Such second pruning should be even less than the winter cutting, including only the removing of dead wood, the correction of crowding, the cutting out of weak growths, and the general balancing of the plant, never a severe cutting. After this summer pruning, water is again supplied, and the bush starts growth; in other words, there is really a second springtime of roses in such climates, although not as distinct in strength or number of blooms as the northern spring, or even its own southern springtime.

Where there is danger from repeated late frosts, after hot growing conditions in late winter or early spring, such as obtains in locations of some altitudes in the Southeastern or in the Interior Southern Zone, the plants should be pruned late and after growth has commenced. Such pruning should be several eyes higher than that suggested for the Central Zone, so that, as all growths at the top of the cane receive the most sap and grow first, the plant may be cut back should a late frost injure the upper growths, lower and more dormant shoots then being used.

If the directions in the chapter under "General Care" are carried out in conjunction with this pruning, late frosts may be combated without serious damage.

These rules are for the general pruning of the typical Hybrid Tea, and when a variety tends to Tea habit, or is of distinctly low and spreading growth, it will be necessary to consider such conditions. Thus, when the foliage is smaller and the Tea characters are plainly evident, as already herein described, less pruning is necessary than for the usual Hybrid Tea variety.

Plants of low and spreading growth give a more evenly distributed supply of sap to all growths than do upright growers, and should not be pruned

as hard. In these, always prune such to an eye leading upward.

Hybrid Teas with Pernetiana blood (Austrian Brier hybrids) should be pruned the same as the Hybrid Teas.

In the Central Zone, a few very large growers among the Hybrid Teas may be treated in the same manner as the ordinary Hybrid Tea in Southern Zones. If possible, wait until after a drought in July or August, and then prune back roses like Mrs. David Jardine or La Tosca, which grow to over 3 feet, cutting back weak wood to a few eyes, strong wood being shortened three or four eyes. Top feed and water thoroughly, and a good burst of bloom will result. Do not try this method on continuously flowering decorative varieties, such as Gruss an Teplitz and Ecarlate, which will give sufficient bloom without it.

Symmetrical bushes are easily obtained by proper pruning. It is not difficult to balance the plants by encouraging growths where needed. The center should be kept open and tangles avoided. Enough emphasis on symmetry has not been customary in American pruning practice.

CHAPTER XI

THE TEA ROSES

PARSONS* claims that the original Tea rose arrived in England from China in 1810, which statement is confirmed by Pemberton† while both authorities give 1824 as the date of the importation of the yellow Tea. It is admitted by most rosarians that the lines of difference between the Teas, Chinas, and Noisettes run very close together, yet the dwarf Teas of today are all much of the same type, and are practically agreed upon as a class.

The French achieved success with Teas at an early date, and until the Hybrid Perpetuals appeared the Teas were most popular there and in Great Britain. While the Hybrid Teas and the Pernetianas have displaced the Teas in England, yet the latter are much better adapted to our Southern, Interior Southern, and Southwestern Zones

*"Parsons on the Rose," by S. B. Parsons. Last edition 1910. Orange Judd Co., New York.

†"Roses: Their History, Development, and Cultivation," by J. H. Pemberton. An English publication; last edition 1920. Longmans, Green & Co., New York.

than the first two classes, for not only do they retain their foliage wonderfully, but most of them are more lasting in form and color than the majority of the other two types. In addition, the Teas attain remarkably large growth in the noted areas, and their number of blooms surpass the Hybrid Teas and Pernetianas, while they do not die back during growing seasons as do the Pernetianas.

The form of the Tea rose varies considerably, many of them being very full, some of light petalage. In many instances, the form of the rose is most beautiful, both in bud and in open flower. The Teas, as a class, are less subject to mildew than the Hybrid Teas, and are seldom troubled with black-spot.

Unfortunately, England was too cold for many of the Teas, and just as the hardiest Hybrid Perpetuals were discarded for lack of form, so the more tender Teas were turned down for want of hardiness, the old lists containing many charming varieties which cannot be secured today. Nevertheless, the available list of Teas is very complete, and a number of the varieties produce flowers of exhibition value.

Foster-Melliar* gives a very masterful description of the Tea class as grown in England, but it

*"The Book of the Rose," by A. Foster-Melliar. An English work; last edition 1910. The Macmillan Co., New York.

must be remembered that he wrote of them as found in the British climate. He complains of their "impatience of rain and susceptibility to frost," which are drawbacks of little moment in some parts of our country. The same rosarian proclaims their virtues and recommends "dryness and warmth in the soil as well as in the air, and thorough drainage, preferably in a porous soil," all of which has been since confirmed with us.

In the Central East most of the Teas are of little value, as shown when they were carefully tested by Dr. Huey, who made frames of wood in winter to protect his plants from the cold. Even when the bushes live after zero conditions, the wood is severely killed back by the frosts, and after hard winters little is left, so that the size of the bushes is much less than in other zones devoid of frost extremes, the plant does not produce its normal growth, and is deficient in number of flowers developed. Maman Cochet, on account of this winter-killing, gives but twenty blooms per plant during the entire season near Philadelphia, while in California and the South it will often have fifty well-developed flowers on the bush at one time.

Some English authorities claim that Teas are most prolific when used as standards, budded 2

feet from the ground, and this is perhaps true in their climate, but with us, as a rule, standards do not appear to do as well as dwarfs, and this may be accounted for by our extremes of heat and cold. In the Pacific Northwest, or favored sections with nearly similar minimum temperatures, and with the additional advantage of coolness in summer, it would be well to try low-budded standard Teas; but our Northern and Central Zones are too cold for them, and our Southeastern, Interior-Southern, and Southwestern Zones are too hot for them, and the stems of the standards sunburn badly.

Teas in the Southwestern, Interior-Southern, and the Southeastern Zones grow to prodigious size, and the best do splendidly on their own roots. The faults of the Teas in our Southern Zones are that the lighter kinds discolor in rain or heavy, damp, or very hot winds; that many have weak stems for cutting (Maman Cochet improves its stem in dry heat), and a few tightly rolled varieties ball and discolor in wet ocean winds. As a class, they are not as good for cutting as the best of the Hybrid Teas, but for garden decoration are greatly superior in the Southern Zones just noted. Their fragrance is generally mild, and in rare instances slightly rank. Good red Teas for cutting are scarce, but the other main colors give us every-

thing desired, if the best varieties are carefully selected.

Unquestionably, Teas are the best roses for our heated sections with long growing seasons, and are most strongly recommended for both coastal and Interior-Southern climates, except where frosts go much below 20° for lengthy periods, and even here the hardiest of the class will flourish, but, of course, will not give the same quantity of bloom if winter-killed. Unless the bloom has been discolored by rain, or they are very thin kinds, they last exceedingly well, and the lighter-toned varieties hold their color better than the Hybrid Teas, though the stems are often inferior.

RECOMMENDED TEA ROSES

The initials after each rose indicate the section suggested: thus, N. North; Cen., Central; S.-E., Southeastern; Pac. N.-W., Pacific Northwestern; Pac. S.-W., Pacific Southwestern; I.S., Interior South.

ALEXANDER HILL GRAY. A. Dickson, 1911. *Hardy*.

Deep lemon-yellow; long-pointed bud; large, full flowers; lasts very well; tea fragrance. Splendid foliage, seldom diseased and holds well. Fine spreading growth; long stem, sometimes weak.

Gives close to fifty blooms in Cen. Zone; over forty in Washington, D. C., for Mr. Gersdorff, on own roots. Included in English Rose Society's list for exhibition roses of 1921, but not noted for exhibition later. A very fine rose which stands winters well in Cen. Zone and retains its foliage in long seasons. Darker than Lady Plymouth, but must be especially fine to compete in exhibition. Of good value for cutting, as a rule. Reported free of mildew and black-spot by Chase Nursery Co., of Chase, Ala.
Pac. N.-W. Pac. S.-W. I.S. S.-E.





PLATE XIV. Above: Hybrid Sweetbrier Roses in Central Zone in spring
Below: Baronesse van Ittersum, Mult., in Central Zone in spring
(See page 174.)

ANNA OLIVIER. Ducher, 1872.

Fawn, shaded lighter rose, occasionally slightly darker; lovely bud; flowers somewhat thin, but of good form and size; fragrant. Foliage very good and lasting. Vigorous growth in S. Zones. S.-E. Pac. S.-W.

BON SILENE. Hardy, 1835.

Salmon-rose to carmine.

Winter-kills as far south as Washington, D. C.; only suitable in climates without frost. One of the older Teas which still does well in the S.-E. Zone; of fair cutting value only. Miss Creighton, of west coast of Florida, reports it as being a continuous bloomer. [S.-E.]

BRIDE (syn., *The Bride*). T. May, 1885. (Sport of Catherine Mermet.) *Not hardy in Cen. Zone.*

Pure white, occasionally with primrose flush at base of petals.

At one time one of the best English white exhibition roses, but lately superseded by newer introductions. Of great value in our S.-E. Zone, and possibly more of a cream than a pure white there, giving long stems, with beautiful form in bud and open flower, fragrant like its parent, and foliage slightly liable to mildew. [S.-E. Pac. S.-W.]

BRIDESMAID. Moore, 1892. (Sport of Catherine Mermet.) *Not hardy in Cen. Zone.*

Clear, deep, silvery pink, of a deeper color than its parent, and therefore more desirable; fragrant. Foliage mildews slightly; should be carefully fed to secure best results; good for cutting.

In England displaced by many newer roses, but nevertheless valuable in the S.-E. Zone where it grows well and blooms continuously. [S.-E. Pac. S.-W.]

CATHERINE MERMET. Guillot fils, 1869. *Not hardy in Cen. Zone.*

Light pink, with fawn or cream center; profuse bloomer; of splendid growth in S. Zones; also stands shade in Pac. S.-W., with growth of large size; wilts in great heat. [S.-E. Pac. S.-W.]

COMTESSE DE NADAILLAC. Guillot, 1872.

Coppery yellow, washed deep rose; generally of good size.

Not hardy in Cen. Zone, and even in the South of uncertain growth, but of remarkable beauty in form and color. Although a shy bloomer, is fine for exhibition when well grown.

S.-E. Pac. S.-W.

114 ROSES FOR ALL AMERICAN CLIMATES

COMTESSE RIZA DU PARC. J. Schwartz, 1876. (From Comtesse de Labarthe.)

Light rose to bronze, variable; medium size; slightly cupped form; fragrant.

One of the Teas which Dr. Huey grew near Philadelphia and discarded as not hardy. A beautiful variety; seldom needs disbudding. [S.-E. Pac. S.-W.]

CORALLINA. W. Paul, 1900.

Rose to coral-red; semi-double.

Not hardy in Cen. Zone, but of vigorous growth in S. Zones. Noted in England for fall bloom and in New South Wales for winter bloom. [Pac. S.-W.]

DUCHESSE DE BRABANT. Bernède, 1857.

Soft silvery pink; bud short; globular, open cupped flower. Growth vigorous and bushy; perfect foliage. Decorative only.

Hardy but of small growth in Cen. Zone; splendid growth throughout S. Zones; blooms constantly throughout entire year in the Pac. S.-W. [S.-E. Pac. S.-W. I.S.]

ETOILE DE LYON. P. Guillot, 1881. *Generally hardy in Cen. Zone.*

Deep sulphur-yellow; fine double flower, which needs heat to mature. Of good growth in S.-E., but usually has short stems.

Reported by Miss Creighton, of west coast of Florida, as being a continuous bloomer. A fine decorative in the Pac. S.-W. S.-E. Pac. S.-W. I.S.]

G. NABONNAND. Nabonnand, 1889.

Lightest salmon-pink, shaded rose, base sometimes tinged with yellow.

Hardy in Washington, D. C., on own roots for Mr. Greeley, giving him as high as two hundred and twenty-nine blooms. A decorative rose only. Prune high. [S.-E. Pac. S.-W.]

GEORGES SCHWARTZ. Schwartz, 1899. (Kaiserin Auguste Viktoria × Souvenir de Mme. Levet.)

Clear canary-yellow; fine bud-form; large semi-double flower, opening well in damp and cold winds. Foliage and growth good.

Said to be of climbing habit in New South Wales and may be expected to have that attribute in S. Zones. Recommended by Hazlewood, of New South Wales. [Pac. S.-W.]

GOLDEN ORIOLE. Shepherd.

Deep saffron-yellow to deep cream; blooms are small but very double; in heat retains its color and keeps a high center; gives many blooms at one time; of decorative value only. Foliage perfect and well retained. Grows to 5 feet, with sturdy habit. No record of more than a few degrees of frost.

Originally introduced by Mr. Shepherd, of Ventura, and sold there locally. Said to be a sport of William Allen Richardson, and while showing some Noisette characteristics of wood and foliage, is not a climber and blooms singly. Distinct and beautiful, well worthy of cultivation in S. Zones. To be propagated by Howard & Smith, of Los Angeles, Calif. Prune very sparingly.

Pac. S.-W. S.-E. I.S. (with little frost).

HARRY KIRK. A. Dickson, 1907. *Most hardy.*

Soft cream-yellow to cream-flesh; bud long and beautiful; open flower loose, with few but substantial petals; fades quickly as it opens. Foliage fine, but often lost early. Growth very good. The excellent substance of this rose gives it keeping qualities, and its exceptional hardiness recommends it for the North. Among the varieties commended by Robert E. Hughes, of Buffalo, N. Y. [N.

HELEN GOOD. Good & Reese, 1906. (Sport of Maman Cochet.)
Hardy in Cen. Zone.

Soft, light pink, shaded rose; has good form, size, and stem, and is lasting. Foliage very good. Gives over two dozen flowers in Cen. Zone. [Pac. S.-W. S.-E. I.S.

ISABELLA SPRUNT. Sprunt, 1866. (Sport of Safrano.)

Light sulphur-yellow; lovely buds, opening to semi-double flowers. Of fine growth in the South, but of value only for garden decoration. [S.-E. Pac. S.-W.

LADY HILLINGDON. Lowe & Shawyer, 1910.

Deep apricot-yellow; lovely buds, semi-double when open; slight spicy fragrance.

Not perfectly hardy nor a good grower in Cen. Zone, where it gives about three dozen blooms; generally of little cutting value, as it is semi-double and stem wilts in heat, but a beautiful garden decorative, even though the color fades. Reported as thriving in Danville, Ky., by Mr. Wood. Gives wonderful color in Pac. S.-W., if grown in shade, under which conditions it does not

bleach for several days, petals seem to increase in substance, and stem is longer and stronger. A profuse bloomer in the South. The wood is tinged with red, as is also the young foliage. Gives fine results in Washington, D. C., on own-root plants for Mr. Gersdorff. Among first twelve in 1922 referendum of American Rose Society, for Western States. In English vote, equal fourteenth for general garden cultivation; also included in first eighteen of New South Wales. Prune sparingly
Pac. N.-W. S.-E. I.S. Pac. S.-W.

LADY PLYMOUTH. A. Dickson, 1914. *Hardy*.

Deep ivory-cream; large, full, spiral flowers; lasts very well; slightly fragrant. Foliage almost perfect, holds well. Sturdy bush and good stem.

Gives thirty blooms in Cen. Zone and a few more in Pac. N.-W. Equal thirty-first for exhibition in English vote of 1923. Immune from mildew under worst conditions. A fine garden rose, with good cutting value, and should produce more blooms in S. Zones. The English Rose Annual recommends hard pruning to four to six eyes. This is not advised except for Pac. N. W. Zones.
[Cen. S.-E. Pac. N.-W. Pac. S.-W. I.S.]

LADY ROBERTS. F. Cant, 1902. (Sport of Anna Olivier.) *Hardy*.

Apricot, with fawn-yellow base; rather below medium size; little fragrance; does not spoil in rain or ball in damp winds, but becomes smaller in heat. Foliage very fine and lasts well. Is of fair value for cutting, and is sometimes used to advantage for exhibition in the Pac. N.-W. Prune hard for cut-flowers in Cen. and Pac. N.-W.

Growth fair in Cen. Zone, fine in Pac. N.-W. and S. Zones. Stem long and generally of fair strength, except in Cen. Zone. Gives about forty blooms in Cen. Zone, more in Pac. N.-W. and Pac. S.-W.
[Cen. S.-E. Pac. N.-W. Pac. S.-W.]

LENA. A. Dickson, 1906.

Glowing apricot, edges of petals primrose-yellow—a beautiful color combination. In Cen. Zone a very tender rose, with weak growth and giving only twenty-five small blooms. Stem weak and rather short, and foliage susceptible to disease; needs very careful culture.

A typical collector's rose which is most beautiful at its best, but requiring a dry climate without too great heat and no cold extremes in winter.

MAMAN COCHET. P. Cochet, 1892. (Marie van Houtte × Mme. Lambard.)

Carmine-rose, shading to cream and fawn at the center; very large, full bloom, often divided; fragrance mild. Foliage practically perfect. Of only fair growth in Cen. Zone, as it winter-kills to within 6 inches of ground, and the number of blooms is below twenty; stem fairly strong. Where it does not winter-kill, it grows very large and bushy, and continually produces literally hundreds of blooms, although under this condition the stems are often weak.

Rated in first eighteen of National Rose Society of New South Wales, and by all odds the best pink T. for garden decoration and cut-flower purposes combined. May be grown as a hedge. Rated as thirty-first in exhibition roses in English vote of 1923. Holden's Nursery, West Palm Beach, Fla., reports it as balling. A. J. Keen, Phoenix, Ariz., gives it as a principal variety. Recommended for west coast of Florida by Miss Creighton. Also recommended by the Rev. J. A. B. Oglevee, of Caldwell, Kans., as being one of the best roses for that section.

Pac. S.-W. I.S. S.-E. Pac. N.-W.

MARIE VAN HOUTTE. Ducher, 1871. (Mme. de Tartas × Mme. Falcot.) *Hardy*.

Lightest cream-flesh, often with light peach center, petals edged pale rose; globular bud, opening slowly; lasts quite well; balls and discolors in dampness, otherwise a very valuable rose; fragrant. Foliage good. Growth fair in Cen. Zone, very fine in S. Zones. Stems short, often very weak.

Recommended in English lists of 1921 for growth on a dwarf wall. Undoubtedly reflected heat from the wall would cause this rose to open better in a damp climate. Mr. Ellwanger considered it the finest of the outdoor Teas for New York. Is found to be valuable in New Orleans. Of little value as a cut-flower, but fine for garden decoration.

S.-E. (except near coast). I.S. Pac. S.-W. (on wall or protected from damp ocean winds).

MEDEA. W. Paul, 1891.

Light canary-yellow; large, of good form.

Vigorous grower in S. Zones and especially adapted to warm weather. While not as hardy as some, should be tried in large collections. Sometimes of value for exhibition. [S.-E.]

118 ROSES FOR ALL AMERICAN CLIMATES

MISS ALICE DE ROTHSCHILD. A. Dickson, 1910.

Light canary-yellow to deep citron-yellow; bud somewhat short, but flower very double, opening well and lasts; fragrant.

Not always hardy in Cen. Zones, preferring a milder and drier climate. It is reported to be especially fine in low altitudes in Idaho. Gives twenty-nine blooms in Cen. Zones. Mildews under damp conditions. [S.-E. Pac. S.-W. I.S.]

Mlle. FRANZISKA KRUGER (sometimes listed with the prefix "Mme." or as Francisca Krüger). Nabonnand, 1880. (Catherine Mermet $\times$ General Schablikine [T.])

Cream or light flesh on outer petals, center yellow to copper, often with splashes of lilac; bud short; flower double, and holds center well; fair in size, and does well in heat, liable to discolor in rain, and to ball in extreme dampness. Foliage good and well retained. Fine growth, but with short stems; of little cut-flower value. Because of continuous flowering is useful for massing and for hedges, being of sturdy growth in the S. Zones. Does remarkably well in the interior valleys of California.

I.S. S.-E.

MME. ANTOINE MARI. Mari, 1901.

Rose-pink, opening lighter; nice shape, but small flowers; balls and discolors in damp winds. Foliage nearly evergreen, without disease. Growth very good; stem weak. Very profuse bloomer and fine as a decorative, except for the drawback of its light color. [S.-E.]

MME. CONSTANT SOUPERT. Soupert & Notting, 1905. (Souvenir de Pierre Notting $\times$ Duchesse Marie Salviati.)

Golden yellow, shaded peach-pink; good size and form, and of exhibition value. Foliage very fine. A fair grower only; does well in hot weather. [S.-E. I.S. (without frost).]

MME. JEAN DUPUY. P. Lambert, 1901.

Deep yellow, edged rose; good bud, holds high spiral center as a half-open bloom; fair size; fine form.

In the Pac. S.-W., of free growth, short stem, and very good foliage. Does not discolor easily or ball; lasting. Prune lightly. S.-E. Pac. S.-W. I.S.]

MME. LAMBARD. Lacharme, 1878. (From Mme. de Tartas.)

Clear light to dark salmon-pink. Very strong grower in S.

Zones, but more of a decorative or for hedges than a cut-flower variety. Foliage is well retained. A constant bloomer.

Recommended for west coast of Florida by Miss Creighton. Does very well in New Orleans. [S.-E. Pac. S.-W.]

MME. RATHSWELL. Two plants of this rose cultivated by the Golden State Nurseries, Santa Monica, Calif. No record of introducer, and questionable if name is correct. *No record of hardiness.*

Bud carmine, opening rose, with deeper shadings, somewhat short; open flower double and holds center well; though small, often of value as cut-flower.

A climber or semi-climber with perfect foliage, which stands the dampest conditions without mildew. Blooms practically the whole year in Pac. S.-W. Most valuable because it neither balls in dampness nor opens too quickly in heat and retains color well. To be propagated by Howard & Smith, Los Angeles, Calif., and Bobbink & Atkins, Rutherford, N. J.

S.-E. Pac. S.-W. I.S. Test for Cen. and Pac. N.-W.

MME. VERMOREL. Mari, 1901.

Coppery yellow, with bronze-red center; medium size; balls badly in wet; is especially adapted to heat as it lasts remarkably well and requires warmth to develop its fullest beauty. Very fine foliage well retained. Very hardy in Cen. Zone for a T., and of fine growth and stem. Gives twenty-three blooms in Cen. Zone and many more in S.

I.N. (southern parts). S.-E. (except near coast). I.S.

MRS. B. R. CANT. B. R. Cant, 1901. *Very hardy.*

Deep rose to a silvery buff center; form varies, being flat in the East, yet without open center and is of good size. Does not ball and holds its color well, even in heat. Has beautiful foliage and long stems. Of splendid growth, and blooms constantly.

A most valuable rose. Gives a larger bloom in Pac. S.-W., but of only fair cutting value. Has fifty blooms in Cen. Zone, many more in S. Zones. Recommended by Paul Lindley, of Pomona, N. C. [Cen. S.-E. Pac. S.-W. I.S.]

MRS. CAMPBELL HALL. Hall, 1914.

Delicate creamy buff, edged or suffused rosy carmine. Of fair hardiness in Cen. Zone, but of small growth there. Valuable for its color.

A collector's rose, and suggested for the S.-E. Zone only.

120 ROSES FOR ALL AMERICAN CLIMATES

MRS. DUDLEY CROSS. W. Paul, 1907. *Hardy in Cen. Zone.*

Light lemon-yellow, outer petals splashed rose. Gives close to two dozen blooms in Cen. Zone, with good growth and stem, but foliage mildews badly. Flower lasts well, and is fine for cutting. Especially adapted to dry southern climates, even with zero weather in winter and late spring frosts. [I.S.]

MRS. EDWARD MAWLEY. A. Dickson, 1899.

Bright carmine, shaded salmon; a very large and fragrant rose of beautiful form. Remarkably fine for exhibition when well grown, but difficult to bring to perfection.

The 1915 English Annual contains an article on the proper care of this variety. Needs thorough drainage and protection from heavy winds. Prune sparingly. [S.-E. Pac. S.-W.]

MRS. FOLEY-HOBBS. A. Dickson, 1910.

Ivory-white. Hardy in Cen. Zone, but a shy bloomer there, with less than two dozen flowers.

Voted to be the best exhibition T. in England, in 1923, and among the winning roses in Portland as last noted in the American Rose Annual. Prune hard for exhibition. [Pac. N.-W.]

MRS. HERBERT STEVENS. McGredy, 1910.

White, occasionally with soft fawn shading in center; beautiful buds of rather thin petalage, and balls slightly, although frequently of exhibition value. Weak grower in Cen. Zone; more sturdy further south. Fairly continuous in bloom, and having nice stem and good foliage.

Voted equal thirteenth in England, in 1923, for garden cultivation, and listed among the first eighteen by the National Rose Society of New South Wales. Not to be compared to such roses as Mrs. Charles Lamplough or Comtesse de Cassagne.

S.-E. I.S.

PAPA GONTIER. Nabonnand, 1883.

Color varies from light rose to dark vermilion, sometimes with traces of yellow shading at base of petals; beautiful bud, but opens loose, with scanty petalage in heat; fine substance; fragrant; does not ball or discolor in heavy winds, but bleaches somewhat in heat. Has fine foliage and blooms constantly.

Not hardy in Cen. Zone, but farther south does well. Is of little value for cutting unless taken early, but makes a beautiful bush in the garden. Climbing sport preferable to the dwarf form.

S.-E. Pac. S.-W.

PERLE DES JARDINS. Levet, 1874. (From Mme. Falcot.)

Chrome-yellow, slightly shaded copper, outer petals changing to creamy yellow; good bud; perfumed. Foliage attractive and good. Stem fairly good.

This old rose, once the main indoor cut-flower rose of America, is not hardy in the Cen. Zone but in S. gives fine growth. Not mentioned in American or English Annuals, but noted by Hazlewood, of New South Wales, and recommended by many American growers throughout the South. Does well in Pac. S.-W., but there seems to be a general opinion that it is better to grow the climbing sport rather than the bush form of this rose. Is found useful in Gulf Coast regions, but balls in damp winds.

S.-E. (except near coast). I.S. (without winter temperatures below 20°).

RED COCHET (syn. Niles Cochet). California Nursery Co., 1906. (Sport of Maman Cochet.) *Hardy*.

Cherry to deep claret-red on outer petals, lighter within; form almost identical with its parent, but claimed to be a trifle smaller and with better stems; slight fragrance. Fine foliage, and otherwise like its parent. The California Nursery Co., of Niles, Calif., catalogue it.

[S.-E. Pac. S.-W. I.S.]

ROSOMANE NARCISSE THOMAS. Bernaix, 1908. *Hardy*. (Sometimes classed as a China.)

Saffron to burnt-orange and crimson—varies; comes small in heat, but does not ball in wet or fade or discolor. Growth good to very good; almost thornless. So distinct in color that it is attractive for cutting, even when small, and lasts well. Wood and foliage tinged with red. Hardy in Cen. Zone, where it is of fair size and nice form, with very long stem and good foliage.

Cen. S.-E. Pac. N.-W. Pac. S.-W. I.S.

SAFRANO. Beauregard, 1839. *Quite hardy*.

Clear, deep fawn-yellow to apricot; only semi-double. Gives living wood well above ground-level in Cen. Zone after winter. Totals a scant one hundred blooms in the same zone, but while of fair form has a weak stem and is of little value for cutting. Foliage mildews, but it is a profuse and constant bloomer in S. Zones.

Noted as the best bloomer by W. S. Fitch, of Gulfport, Mo.; is a standard sort in New Orleans.

[S.-E. Pac. S.-W.]

122 ROSES FOR ALL AMERICAN CLIMATES

SOMBREUIL. Moreau-Robert, 1850. (From Gigantesque.)

Creamy flesh to light pink; short, ovoid bud, opening quickly to a double flower of large size, but somewhat flat. Plant of strong growth and listed by Mr. Ellwanger as "the most vigorous of the White Teas." Foliage holds well and is usually free from disease. Discolors in damp winds. [I.S.]

SOUVENIR DE PIERRE NOTTING. Soupert and Notting, 1902. (Maréchal Niel $\times$ Maman Cochet.) *Hardy.*

Dark yellow, verging to copper and apricot, often with lilac splashes near edges; form full. Good stem and fine growth. A rose of great hardiness, enduring in the Cen. Zone. Valuable for cutting, and resisting late frosts well. Foliage generally well retained and immune from mildew under worst conditions.

S.-E. Pac. S.-W. I.S.

SOUVENIR OF STELLA GRAY. A. Dickson, 1907. *Not hardy in Cen. Zone.*

Light to deep orange, beautifully variegated by apricot and crimson shadings; buds and open flower short, loose, and of only fair size; fragrant. Foliage very fine. [Pac. S.-W.]

SULPHUREA. W. Paul, 1900.

Sulphur-yellow; semi-double. Good for decoration only. Foliage of a purple tint and without disease. [S.-E.]

SUNSET. P. Henderson, 1883. (Sport from Perle des Jardins.)

Apricot—varies; balls near coast, but fine inland in dry climates without frost. Much like parent. [S.-E. I.S.]

WHITE MAMAN COCHET. Listed in 1923 English Annual as introduced by Bennett in 1897; listed in 1921 American Rose Annual as brought out by Cook in 1896. (Sport of Maman Cochet.)

Cream-flesh to light lemon; slight perfume. Identical in every way in habit of growth to Maman Cochet, and a rose which does not fade easily, being one of the best of its color in this respect.

Received only a scattering vote in the American Annual, but classed equal seventeenth in English Annual vote of 1923 for exhibition roses. Foster-Melliar considered it an improvement in form over its parent, and advises that if given too liberal treatment the blooms come divided. Recommended in first eighteen dwarf roses by Rose Society of New South Wales. Reported free

of mildew and black-spot by the Chase Nursery Company, of Chase, Ala. Holden's Nursery, of West Palm Beach, Fla., reports that it does well on Mme. Plantier stock, and does not ball. A. J. Keen, Phoenix, Ariz., gives it as a principal variety. Recommended by Westover Nurseries, Clayton, Mo. Rev. J. A. B. Oglevee, of Caldwell, Kans., recommends it as being one of the best roses for that section.

S.-E. Pac. S.-W. I.S. Pac. N.-W.

WILLIAM R. SMITH (syns., Maiden's Blush, President Smith, Blush Maman Cochet, etc.) Smith, 1908; intro. by P. Henderson. (Maman Cochet $\times$ Kaiserin Auguste Viktoria.)

Soft silvery flesh, shading to cream-peach, edges with lilac splashes; form lovely; fine size; lasting quality is almost perfect. Stem strong; growth good.

Hardy for a T. and endures the cold in the Cen. Zone, but gives only a good dozen blooms there. In S. Zones it is a much more constant bloomer. A fine cutting rose, and especially valuable on account of its hardiness against late spring frosts and for its retention of foliage. Recommended for west coast of Florida by Miss Creighton. Immune from mildew under worst conditions.

S.-E. Pac. S.-W. I.S.

THE PRUNING OF TEA ROSES

The Tea rose requires a somewhat different method of pruning than the Hybrid Perpetuals and the Hybrid Teas. In the Northern and Central Zones, the winter-killing of the wood, with few exceptions, decides where the Tea should be pruned; in other words, the frost kills back the wood close to the ground, and it is only possible to save the living canes. Of course, attention must be given also to the usual removal of dead wood, the thinning of very weak wood, and the opening of the center.

In England, exhibition Teas are treated on somewhat similar lines to the exhibition Hybrid Perpetuals and Hybrid Teas, but for garden purposes the Tea is intolerant of the knife, and in our Southern Zones the great beauty of the Tea lies in its splendid growth, retained foliage, and constant and prolific blooming. It becomes a case of preferring a constant mass of ordinary flowers to a very few almost perfect specimens.

In the last vote of the members of the English Rose Society, as recorded in their 1923 Rose Annual, there are only five Tea Roses mentioned in a list of thirty-seven exhibition varieties, and only one of these Teas is below seventeenth place in the rating, Mrs. Foley-Hobbs being placed equal seventh. Mrs. Foley-Hobbs is ivory-white in color, and was beaten for position by two other white roses which were not Teas, both of which were equal first in the whole list. A third white variety, not a Tea, tied with Mrs. Foley-Hobbs for equal seventh.

The history of exhibition roses in England has been marked by the gradual elimination of the Tea, the old varieties written of by Hole, Foster-Melliar, and Pemberton having been displaced by newer roses of other breeding. As an example of this, Mrs. Herbert Stevens may be quoted as a

Tea which was once used for exhibition, and also was a great favorite in the garden. This rose does not compare in beauty of bloom with a number of the newer exhibition varieties, and except for its growth, continued bloom, and retention of foliage, should not be used in our country save under favorable conditions or in large collections.

For our Pacific Northwestern centers of rose-growing, particularly in Portland, Ore., one finds the same lack of Teas in the winning exhibition displays, and as such wonderful roses as Mrs. Charles Lamplough become better known, there will be even smaller showing of the Tea rose; but, nevertheless, it must not be overlooked that in the Southern Zones the Tea is far to be preferred on account of its adaptability to these sections, in its constant blooming and retention of foliage.

From these facts, it would seem that the day of the Tea, as an exhibition rose, is limited, and that, therefore, its pruning should be planned for garden decoration, with fair cut-flower value. In the Southern Zones it stands unequalled as a dwarf for such cultivation, rivaling its sisters grown in southern France, the home of its class.

Varieties with strong, upright growths should be shortened more than spreading sorts with horizontal branches, and weaker growers should be cut

back further than strong ones. As a general rule, the Tea should be pruned lightly, thereby causing it to become the support of literally dozens of blooms at one time, retaining remarkable beauty throughout the season.

This method will not give as fine stems as if the variety were cut back. One always regrets that such a beautifully colored rose as Mme. Jean Dupuy usually comes with a weak and crooked neck, and is, therefore, of only small value for cut-flower purposes, but, comparing this sort during the past spring with the very newest of the modern Hybrid Teas, it must be conceded that this old-fashioned rose is still absolutely distinct in color, and that the beautiful symmetry of its bush and the absolute immunity from disease of its foliage make it most attractive, and in these characteristics far superior to the more recent introductions.

As with other classes, special pruning, where needed, is recommended in the list of varieties.

CHAPTER XII

THE AUSTRIAN BRIERS AND THEIR HYBRIDS (PERNETIANAS)

IN 1900, the great French hybridizer, Pernet-Ducher, bred Soleil d'Or from one of the Austrian Briers, the Persian Yellow, crossing it with the Hybrid Perpetual, Antoine Ducher.

This rose was of large size, with a color contrast in gold and vermillion that was both striking and unique. Unfortunately, this variety and others of similar breeding developed serious faults, for not only was the foliage liable to black-spot, but the wood died back during the growing season, and the blooming was of short duration. With an infusion of new blood, the Lyon Rose was produced in 1907, and this gave a more prolonged season of bloom. Unfortunately, this variety also died back badly, the stem was often weak, and the foliage lost early.

The late Dr. W. Van Fleet, in an article in the American Rose Annual for 1916, stated that "*Rosa lutea* (*R. foetida*) has been used extensively in cross-breeding with *R. rugosa*, but has given little result except in the production of the dark crimson

Rugosa hybrid, Agnes Emily Carman." He further stated that chance or self-fertilized seeds from Harison's Yellow very seldom germinate, and that he had never been able to secure plants by pollinating its blooms from other roses, even after making six hundred crosses.

Persian Yellow is the *R. lutea* pollen parent of the Hybrid Sweetbrier, Lord Penzance, and also is noted as one of the parents of Soleil d'Or.

It is almost impossible to give exact information of all the parents used in Europe in the improvement of this class; but in America, Fred H. Howard, of Los Angeles, California, crossed Lyon Rose with Mme. Segond Weber and produced Los Angeles, a remarkable achievement. This rose is generally listed as an Hybrid Tea. Later, he also brought out Miss Lolita Armour, William F. Dreer, and Mrs. S. K. Rindge, from similar crosses.

In this connection, there has been some confusion as to the differences between the Hybrid Teas and the so-called Pernetianas, and, undoubtedly, it is almost impossible to classify them with exactness without going back through the rose lists and taking from the Hybrid Tea class many roses which have Pernetiana blood; and the distinction becomes increasingly difficult. In "The Rose in America," the Editor of the American Rose



PLATE XV. Dwarf Polyantha, Hybrid Rugosa, and China Roses

1, Cécile Brunner, D.Poly.; 2, Miss Edith Cavell, D.Poly.; 3, Tip-Top, D.Poly.;
 4, Marie Pavic, D.Poly., in Elizabeth Park, Hartford, Conn.; 5, F. J. Grootendorst,
 H.Rug.; 6, Cramoisi Superieur, C.; 7, Hermosa, C.



Annual, J. Horace McFarland, frankly classes the Pernetianas as "Hybrid Teas into which has been infused some portion of the hardy yellow Austrian Brier blood."

We have, however, followed the classification of the National Rose Society of England, and the general usage as noted in catalogues, and, when such conflict, have placed the rose according to its characteristics. Eventually, it would seem probable that all varieties with Lutea blood would be classed as Pernetianas, even if with an Hybrid Tea or Tea out-cross, or else that the class would be merged into the Hybrid Tea class, itself of mixed origins. Any classification at this time must of necessity be more or less arbitrary.

The Pernetianas have improved, and it is apparently only a question of time until they are perfected. As a matter of fact, many Hybrid Teas, such, for example, as Gorgeous, show traces of Austrian Brier blood, but as European breeders do not always give the parents, it is difficult to classify their varieties.

The American Rose Society wisely requires the pedigree of roses registered with them, which not only aids classification, but also promotes scientific hybridization.

The beautiful and varying shades of copper and

yellow combined with salmon, cream, and silver, with occasional splashes or even solid markings of crimson and red, give us wonderful loveliness in the unique flowers of the Pernetiana class.

While the colors are beyond praise, the shape and lasting qualities of the blooms are subject to criticism, and so far no really perfect form has been developed.

In England, the new class lends itself to the climate, but owing to our extremes of cold and heat and our long growing seasons, we are unable to cultivate most of the race to great advantage, except in the Pacific Northwest, the northern part of our Southern Zone, the southern part of our Central Zone, and the seacoast Southwestern.

Even in these more equable situations the faults of the race are a disadvantage, but the varieties are, nevertheless, worth growing for the remarkable color combinations noted. In the Interior Southern Zone, the occasional sudden changes from growing weather to severe frost kill back Pernetianas very considerably.

The earlier kinds, such as *Soleil d'Or*, *Juliet*, etc., had practically only one burst of bloom in the Central Zone, but the infusions of Hybrid Tea and other blood in newer sorts give us the same colors with longer seasons, but generally with thin

petalage. Perhaps the best illustration of this is the difference between Juliet and The Queen Alexandra Rose, the first bearing a bloom of great size and number of petals with the one period of blooming, while the second has a smaller, thinner flower scattered over a longer season. Juliet lasts, Alexandra does not; Juliet is of pleasing fragrance, Alexandra almost scentless; Juliet has a long, strong stalk, Alexandra a rather short, weak stem, often with a weak neck. The colors offer very much the same contrast—gold on the reverse and shades of vermilion on the upper side of the petals. The Queen Alexandra is claimed to be almost free from die-back of wood in summer. The class might be said to vary from the extremes of characteristics as noted in these two varieties, combining everything in form from single to very double flowers.

Undoubtedly, hardiness will vary greatly both as to ability to withstand frost and freedom from the dying-back of the wood during growing seasons. One peculiarity is the change of color in fading, deep shades passing to entirely different and often quite solid colors—Mme. Edouard Herriot, for example, from a deep coral-red to a shrimp-pink.

Descriptions that follow are as full as possible, and selections should be made with due regard to the form of the rose, noting that the thinner kinds

last poorly, although the double varieties seldom ball in wet, and nearly all are free from mildew, though quite susceptible to black-spot.

It would seem that crosses between the present hybrids and the Teas might aid in producing a rose with greater petalage and better foliage.

In moist, hot climates all fungous diseases tend to prevail more than in hot, dry climates, and black-spot does not develop as rapidly in a hot climate with altitude, as it does in moist heat.

Climbing sports of Pernetiana dwarfs are already appearing, and it is evident that more will follow. Such roses will be described with the tender climbers, and it should be noted that the characteristics of the parent will undoubtedly be found in the climbing sport, together with the known unreliability of all sports.

THE AUSTRIAN BRIER ROSES AND THEIR HYBRIDS, INCLUDING THE PERNETIANA TYPE

The initials after each rose indicate the section suggested: thus, N. Northern; Cen., Central; S.-E., Southeastern; Pac. N.-W., Pacific Northwestern; Pac. S.-W., Pacific Southwestern; I.S., Interior South.

AUSTRIAN COPPER. (Austrian Brier, subspecies.) Gerard, 1596.
Extremely hardy.

Nasturtium-red to yellow; single; medium size. Foliage free from mildew. Short stem; vigorous growth. Canes very thorny, brownish red color. Only one period of bloom, which is very early. Decorative only.

Phillip B. Stewart, of Colorado Springs, Colo., reports very good results with this rose in his climate. [N.]





PLATE XVI. LYON ROSE, H.A.B. (Per.) (See page 135.)

AUSTRIAN YELLOW. (Austrian Brier, subspecies.) Gerard, 1596.
Extremely hardy.

Clear, bright yellow; other characteristics same as Austrian Copper. [N.]

BEAUTE DE LYON. Pernet-Ducher, 1910. *Hardy.*

Coral-red, shaded lightly with yellow glow; large, full, globular. More on the old type, but claimed to flower well in autumn.
Cen. N. (southern parts).

CAMBRAI. Smith, 1921. (Sport of Mme. Edouard Herriot.)

Orange, streaked with lemon. Much the same character as the parent. [Pac. N.-W.]

CHRISTINE. McGredy, 1919. *Hardy.*

Golden yellow—a solid color; form of bud good; opens thin; good substance. Stem quite good. Foliage attractive, light green, glossy.

Equal thirteenth in English vote on best roses for general garden cultivation, 1923. [Pac. N.-W.]

CONSTANCE. (Named in honor of Admiral Ward's daughter.) Pernet-Ducher, 1915. *Not hardy in Cen. Zone.*

Bright golden yellow and canary-yellow; fair form. Weak growth, except in South, where it holds its color well. Loses foliage early.

Pac. N.-W. Pac. S.-W.

CONSTANCE CASSON. B. R. Cant, 1920. *Hardy in Cen. Zone.*

Rich carmine, veined apricot and copper; medium to large, double, globular. Short, stout growth.

Pac. N.-W.

GOLDEN EMBLEM. McGredy, 1917. *Fairly hardy.*

Deep golden yellow to canary-yellow; bud touched light red-dish crimson; good size. Fairly hardy in Cen. Zone, but a shy bloomer.

In southern California, budded on Ragged Robin, this rose stands high among the yellows, having the rare virtues of not balling, opening too quickly, discoloring, or fading easily. In addition, it does not mildew, is a profuse bloomer, with strong stems, and is beautiful as a cutting rose. In England it ranks second among roses for general garden cultivation, and is equal

134 ROSES FOR ALL AMERICAN CLIMATES

thirteenth for combination garden and exhibition roses, being first of Pernetianas in this class. Recommended for Washington by W. E. Sherbrooke, of Kirkland where it has long blooming season, fall bloom, a good number of blooms, and large growth. Recommended by the Breck-Robinson Nursery Co., of Lexington, Mass.

Pac. N.-W. Cen. (southern part). S.-E. Pac. S.-W.

HARISON'S YELLOW. (Austrian Brier Hybrid.) Harison, 1830.
(Said to be a cross of Austrian Brier and a Scotch rose.)
Extremely hardy.

Soft golden yellow; bud ovoid, medium size, opens double; fragrant. Stem short. Ellwanger cites this as a freer bloomer than Persian Yellow; vigorous, with only one early period of bloom. Impatient of pruning. [N.]

INDEPENDENCE DAY. Bees, 1919. (Mme. Edouard Herriot × Souvenir de Gustave Prat.) *Hardy in Cen. Zone.*

A combination of flame-gold and apricot—fades; globular bud, opening loose; decorative only. A continuous bloomer, and gives many flowers.

Doing well for Bobbink & Atkins.

[Pac. N.-W.]

ISOBEL. McGredy, 1916. *Fairly hardy.*

Golden orange-scarlet, fading salmon; single, large size. Growth rather small, not bushy. Wonderful decorative rose where well grown.

S.-E. Pac. N.-W. Pac. S.-W.

JEAN C. N. FORESTIER. Pernet-Ducher, 1920. *Fairly hardy.*

Lincoln-red bud; flower carmine-lake, tinted Chinese-orange and yellow; large and globular in bud and open flower; perfumed.
Pac. N.-W. Pac. S.-W.

JULIET. W. Paul, 1909. *Very hardy.*

Inside deep rose, reverse old-gold; large, full, does not ball; wonderful fragrance. Growth vigorous; good strong stem.

In Cen. Zone gives but one short period of bloom the last of June; in California, blooms over a much longer period, but total number of blooms is small. A much more lasting bloom than The Queen Alexandra Rose. This rose does not do well in extremely hot climates, such as New Mexico. Reports from various parts of the I.S. to same effect. Prune very lightly.

Best in Pac. N.-W.

LOUISE CATHERINE BRESLAU. Pernet-Ducher, 1912. *Hardy in Cen. Zone.*

Distinct shade of coral-red—solid color; globular form, good size, nice substance.

Only fair growth in Cen. Zone, and a shy bloomer there. Not a good cutting rose anywhere, as it is somewhat shy in petals and opens quickly, but it lasts well, and in the Pac. S.-W. blooms freely; foliage lost early.

Pac. N.-W. Pac. S.-W. S.-E. (northern part).

LYON ROSE. Pernet-Ducher, 1907. *Only fairly hardy in Cen. Zone.*

Shrimp-pink at ends of petals, center shading to deep coral-salmon, with yellow glow; bud too thick for its length; flower very full, but somewhat globular, and often too heavy for the stem. Foliage lost early, and plant dies back badly.

Still useful for exhibition in England, being placed twenty-first in National Rose Society votes of 1923; in this country, for collectors or exhibition in the Pac. N.-W. [Pac. N.-W.]

MAY MARRIOT. Marriot, 1918. (Sport of Mme. Edouard Herriot.) *Fairly hardy.*

Glowing apricot. Said to be of same habit and form as its parent. [Pac. N.-W.]

MME. EDOUARD HERRIOT. Pernet-Ducher, 1913. (Unnamed seedling of Mme. Caroline Testout × unnamed Pernetiana seedling.) *Hardy in Cen. Zone; uncertain further north.*

Coral-red-flame, with yellow glow, passing when open to salmon-pink—beautiful color in bud, but opens flat. Stem often strong, but neck nearly always weak.

A rose which took the country by storm on account of its remarkable color, being the first of its shade. Decorative only, as it wilts quickly, dies back somewhat, and loses foliage early. Grows one-third more blooms if only tips are cut back in Cen. Zone, totaling under such treatment nearly fifty flowers. A number of well-known rose-growers in the states of Washington and Oregon contend that in their climate it is good as a cutting flower. Among these may be mentioned Herbert Oldham, president of the Kitsap Rose Society, of Bremerton, Wash. An article by Admiral Aaron Ward in the *Garden Magazine* states that "Herriot is a cross between an Austrian Brier and a Tea."

Cen. Pac. N.-W. Pac. S.-W.

136 ROSES FOR ALL AMERICAN CLIMATES

MRS. AMBROSE RICARDO. McGredy, 1914. *Hardy in Cen. Zone.*

Honey-yellow, outer petals lighter, and sometimes suffused with pink; usually large; quite full, though somewhat flat form. Stem varies, but bloom lasts. [I.S.]

MRS. FARMER. Pernet-Ducher, 1918.

Indian-yellow, reverse reddish apricot; loose, semi-double flower. Not thoroughly tested. [Pac. N.-W.]

MRS. FRED COOK. Easlea, 1920.

Light terra-cotta, edged silvery white; large, full. Reported as an exhibition rose. Somewhat shy. [Pac. N.-W. Pac. S.-W.]

MRS. RAMON DE ESCOFET. Easlea, 1919.

Flame-crimson; large, full. Reported as an exhibition rose. Blooms over a long season. [Not tested.]

MRS. WEMYSS QUIN. A. Dickson, 1914. *Only fairly hardy in Cen. Zone.*

Deep lemon-chrome bud, splashed madder; bloom deep canary-yellow; perfumed.

This rose is shy in Cen. Zone, and of only fair growth and hardiness there. For the past three years in England it has varied from fifth to seventh place in vote on best roses for general garden cultivation. In New South Wales it was eliminated from the list of roses recommended. Does well in Pac. N.-W., but cannot be advised for other sections. Golden Emblem is superior. [Pac. N.-W.]

PERSIAN YELLOW. (Austrian Brier Hybrid.) Willock, 1837. *Extremely hardy.*

Deep golden yellow; nearly full; good form, though quite small. Foliage perfumed; stem short; wood brown; thorns numerous. Only one early period of bloom. Resents pruning. [N.]

RAYON D'OR. Pernet-Ducher, 1910. *Not always hardy in Cen. Zone.*

Sunflower-yellow; large, full, globular form. Weak growth. but a blooming period extending through the season in Cen. Zone, where it approximates fifty blooms. Does well in South. Prune lightly. [Cen. Pac. N.-W. Pac. S.-W. S.-E.]

REV. WILLIAMSON. Pernet-Ducher, 1921. (Not to be confused with other roses named for same rosarian.)

Coral-red, shaded carmine-lake; long bud; medium, full and

globular; decorative only. Foliage bronze-green. Vigorous grower.

Does well for Hazlewood, of New South Wales.
Not tested.

SOLEIL D'ANGERS. Détriché, 1909. *Only fairly hardy in Cen. Zone.*

Deep ochre-yellow, edged vermilion; comes in clusters, and gives over fifty blooms in late June; decorative only, but very attractive. Wood dies back. Prune lightly.

Cen. Pac. N.-W.

SOLEIL D'OR. Pernet-Ducher, 1900. (Persian Yellow × Antoine Ducher.) *Not always hardy in Cen. Zone.*

Orange-yellow, shading to reddish gold and nasturtium-red; medium to large, full, opening flat. Flower lasts quite well, but foliage is lost early and wood dies back. Stem generally good. Prune lightly.

[Cen. Pac. N.-W. Pac. S.-W.]

SOUVENIR DE CLAUDIUS PERNET. Pernet-Ducher, 1920. *Quite hardy in Cen. Zone.*

Sunflower-yellow, deeper center. Stem long, usually strong. Blooms fairly abundant.

In California, tested in both sun and shade, has been shy. Not mentioned in 1923 report of English votes. Hazlewood recommends it for New South Wales where it holds color under heat and does not die back in growing season. A. J. Keen, of Phoenix, Ariz., advises that it needs time to become established. Noted by Mr. Eisele, of Henry A. Dreer's, Philadelphia, as being hardy in that section. The estate of M. H. Walsh, Woods Hole, Mass., reports this rose as fairly hardy.

Cen. Pac. N.-W. Pac. S.-W.

SOUVENIR DE GEORGE BECKWITH. Pernet-Ducher, 1919.

Shrimp-pink, tinted orange-yellow; medium to large, full, globular.

Reported vigorous by Bobbink & Atkins, of Rutherford, N. J. S.-E. Pac. N.-W. Pac. S.-W.

SOUVENIR DE GEORGES PERNET. Pernet-Ducher, 1921. *Quite hardy.*

Oriental red, shading to cochineal, suffused golden yellow; large, globular form; decorative like most of the class.

A. J. Keen, of Phoenix, Ariz., reports this as promising well for his section. Good in California. Likely to supersede Mme. Edouard Herriot and Louise Catherine Breslau. A fine decorative.

[Cen. Pac. N.-W. Pac. S.-W.]

138 ROSES FOR ALL AMERICAN CLIMATES

SOVEREIGN. B. R. Cant, 1922.

Metallic to golden yellow; medium size, opens with light petalage, but holds color. Growth bushy. Blooms well.

Highly recommended by Mr. Murrell, of Roseacre, England. Not tested.

THE QUEEN ALEXANDRA ROSE. McGredy, 1918. *Fairly hardy in Cen. Zone.*

Vermilion, reverse old-gold; bud short; flower opens flat and with open center. Fair growth in Cen. Zone.

The colors are in lovely contrast, and although stem and neck make it poor for cutting, is so attractive for decoration that it cannot be discarded. In southern California it has the fault of opening quickly and dropping its petals early, besides losing foliage. Flowers are shy, but come over a long period. English vote places this rose equal thirteenth for general garden cultivation, and equal seventeenth for exhibition and garden combined.

[Cen. Pac. N.-W. Pac. S.-W.]

WILLOWMERE. Pernet-Ducher, 1913. *Very hardy in Cen. Zone.*

Rich shrimp-pink, shaded yellow in center, toning to carmine-pink; large; opens flat, yet holding a better center than most of class, and of some value as cut-flower, except in great heat; fades easily, and in southern California interior comes a lighter salmon-pink, though a solid color. Strong, upright growth.

Generally listed as an HT., but with Pernetiana habit. Wood of characteristic pithy nature. Reported as the best Pernetiana by George R. Mann, of Little Rock, Ark. Also noted by W. C. Wood, of Danville, Ky., although a shy bloomer with him. Gives over twenty blooms for W. C. Egan, near Chicago. Recommended by the Breck-Robinson Nursery Co., Lexington, Mass.

[Cen. Pac. N.-W. Pac. S.-W. S.-E. I.S.]

PRUNING OF THE AUSTRIAN BRIER AND ITS HYBRIDS

Before the crossing of *Rosa lutea* (*R. fœtida*) with the Hybrid Perpetuals, there were practically only four well-known Austrian Briers, which were used mostly in cold climates for massing. Records show that they have been successful as far north as

Norway and Sweden, and also in our own far northern districts, so that they are known to be extremely hardy. In addition, they require little care and have only one blooming season, which is in the spring. Because they were the only dependably hardy yellow roses, they were extensively planted. It should be noted that they do not propagate easily from cuttings.

The pruning of these old roses, which include the Austrian Copper and Austrian Yellow Briers, Harison's Yellow, and Persian Yellow, is entirely different from that used for the Lutea hybrids. The flowers on these varieties are borne on wood from the laterals, which is of two or three years' growth, and very often on the sublaterals. Therefore, great care must be used in cutting these back so that the laterals and sublaterals are left, because it is such wood that produces the bloom. As the canes do not winter-kill, it is not necessary to cut out much dead wood, but such should be removed and they should be thinned in the spring in this manner. It was suggested by H. R. Darlington in his book "Roses," published by Stokes in 1911, that these varieties should be pruned after the blooming period in spring, because this insured the production of all possible bloom, and this method has succeeded with us when tried. In addition to

this, it is often customary, in order to encourage the growth of the laterals and sublaterals of these varieties, to peg down the main canes, which throws the sap to the lower parts of the stem and stimulates the lateral growth.

The later Hybrid Austrian Briers, the Pernetianas, need practically the same spring pruning as the Hybrid Teas, care being needed for the usual thinning and removal of dead wood and balancing. These roses bloom on wood of the current year, as well as on the old wood, but it should be noted that their wood growth is usually more pithy than that of the Hybrid Teas, and that in cutting back in spring it is difficult to be sure at what point the new growth will commence, so that it is always wise to leave too much wood rather than too little, because any portion which dies may readily be observed and removed later. This pithy wood accounts for the dying back of the class, and such varieties as have firmer canes are less subject to this evil.

In tests made with the well-known Mme. Edouard Herriot in the Central Zone, it was noted that this rose gave one-third more blooms when only the tips of the canes were cut back than if it was pruned to five eyes, but with the longer pruning the stems are weak, although the foliage seemed to be retained longer. As this variety usually has

an extremely weak neck, and as a great many of this class of hybrids are more decorative in the garden than useful for cut-flowers, it would seem that the higher method of pruning should be used as a general rule. This, however, is a matter of personal preference, and where the variety is noted in the list as having strong stems it may be pruned on the same lines as the Hybrid Teas, but thin roses of this type should undoubtedly be pruned for decoration at the point which the frost indicates.

CHAPTER XIII

ADDITIONAL CLASSES OF ROSES

HERE are considered some roses of much value that in the rise of the Hybrid Teas have been overlooked. They deserve greater attention, and will well repay it.

CHINAS AND BOURBONS

The dwarf Chinas and Bourbons are described in the following lists, and such climbing Chinas as are of value have been placed with the rest of the tender climbers. The dwarf varieties have many Tea traits, and are often difficult to separate from them.

It is necessary to include only a few of the best, and, as a rule, they may be said to have good, but not absolute hardiness, fair to good growth, and usually fine foliage, although there are some exceptions to this in recent introductions, which apparently have other blood than China; the most notable example of this is the dark red China (often listed as a Bengal), Leuchtfeuer, which mildews very badly.

Most of the newer Chinas are loose in shape and have little perfume. Queen Mab is, perhaps, the only one with really fine form, so that it stands alone in merit for cut-flower purposes.

The older Chinas and Bourbons are of very different type, and mostly hardier than the later ones, but the form is flatter and the colors generally mediocre and of less variety. For this reason, a number of the older varieties have been discarded, and the list given is cut down to the very best and most dependable sorts, old and new.

In pruning this class, the rules which apply to Teas may properly be used.

THE RECOMMENDED CHINA AND BOURBON ROSES

The initials after each rose indicate the section suggested: thus, N. Northern; Cen., Central; S.-E., Southeastern; Pac. N.-W., Pacific Northwestern; Pac. S.-W., Pacific Southwestern; I.S., Interior Southern.

ARETHUSA. W. Paul, 1903. *Hardy.*

Clear yellow, apricot shading. Foliage very good. Growth fair. [Cen.]

COMTESSE DU CAYLA. P. Guillot, 1902. *Hardy.*

Reddish carmine, tinted orange; lovely bud, but opens loose and becomes floppy; medium size. Rather spreading growth; good stems. Loses foliage. Fifty blooms in Cen. Zone. Best decorative. [Cen. Pac. N.-W.]

CRAMOISI SUPERIEUR (syn. Agrippina). Coquereau, 1832. *Hardy.*

Dark crimson; double, cupped. Good foliage. Medium growth. The climbing sport is better. [S.-E. Pac. S.-W.]

DUCHER. Ducher, 1869. *Hardy.*

White; double, medium size, opens flat. Stems generally too short for cutting. Decorative value only. Forty blooms in Cen. Zone. [N. Cen. I.S.]

144 ROSES FOR ALL AMERICAN CLIMATES

GLOIRE DES ROSOMANES (syn. *Ragged Robin*). Vibert, 1825. *Very hardy*. (Sometimes listed as a Bengal. Ellwanger classes this as an Hybrid Perpetual.)

Crimson-red, with darker shadings, purpling in heat; large, semi-double, opens flat, blooming continuously both singly and in clusters. Growth very vigorous.

A splendid sort for hedges in Pac. S.-W. Used extensively as an understock, and the very best for southern California. Is grown for hedges in Louisiana. [Pac. S.-W.]

HERMOSA. Marcheseau, 1840. *Hardy*.

Soft pink, lighter center—fades in heat; double, flat, medium size; decorative only. Foliage very good. Growth good.

Recommended by the Westover Nurseries, Clayton, Mo. A constant bloomer for J. Horace McFarland, Harrisburg, Pa. Forty blooms in Cen. Zone. [N. Cen. I.S.]

HOFGÄRTNER KALB. Felberg-Leclerc, 1914. *Hardy in Cen. Zone*.

Carmine, with yellow center; large, full. Balls and mildews badly. Vigorous. [I.S.]

LAURETTE MESSIMY. Guillot fils, 1887. *Hardy*.

Light rose, shaded yellow; opens loose. Medium growth. Decorative only. [Cen. Pac. N.-W.]

LOUIS PHILIPPE. Guérin, 1834.

Dark red, shaded purple; medium size, double, globular. Grows to large size in S. Zones; stem short; continuous blooming.

Of no value for cut-flowers, but remarkably fine for color in the garden. Winter-kills in Cen. Zone, and if it does live gives weak growth. In New Orleans is used to produce constant-blooming hedges. [S.-E. Pac. S.-W. I.S.]

MME. EUGENE RESAL. P. Guillot, 1894. *Hardy*.

Buds nasturtium-red and orange; flowers rosy pink, shaded orange; large, double. [Cen. Pac. N.-W. Pac. S.-W. I.S.]

MRS. BOSANQUET. Laffay, 1832. *Hardy*.

Rosy flesh; double, flat. Vigorous. Decorative only. Cen. I.S.]

OLD BLUSH. Parsons, 1796. *Extremely hardy*.

Blush-pink. [N.]





PLATE XVII. Thomasville Rose-Garden, Georgia

QUEEN MAB. W. Paul, 1896.

Soft, rosy apricot, center shaded orange, outside tinted rose and violet; very delicate and beautiful, with HT. form. Small grower, and should be pruned like the HT. list. Not as hardy as the rest of the class, but lives in Cen. Zone.

Pac. N.-W. Pac. S.-W. S.-E. I.S.

SOUVENIR DE LA MALMAISON. Béluze, 1843. *Very hardy.*

Lightest flesh, shaded blush-pink; fair size, opens flat, but holds center. Foliage very good, holds well. Vigorous growth in S. Zones.

Only valuable for decorative purposes on account of foliage retention, free blooming, and lasting. Recommended for Essex County, New York, by Mrs. W. Craig Smith.

N. (lower). I.S.

TITANIA. W. Paul, 1915. *Very hardy in Cen. Zone.*

Coppery crimson bud, opening deep solid salmon-red, with yellow base. Somewhat on the order of Mme. Edouard Herriot, but slightly more double. Medium grower; continuous bloomer. Decorative only. [Cen. Pac. N.-W.]

HYBRID SWEETBRIERS

This class was bred by Lord Penzance in England from crosses between the common English Sweetbrier and some of the garden roses cultivated at that period—1890–1895. They are exceedingly hardy, vigorous, and very thorny, forming almost impenetrable hedges, and, with the exceptions as noted in the descriptions, are of very large growth.

In planting for large hedges, they should be placed in a double row, staggered, with at least 5 feet between the plants. They give only one crop of single or semi-double flowers in the spring, but have the additional attraction of persistent and

sweetly perfumed foliage of somewhat the same scent as their Sweetbrier parent.

The varieties Lord and Lady Penzance do not stand the extreme North as well as the rest, and none of them are absolutely hardy under the most extreme northern cold conditions.

They are useful in the North because of its short blooming season, although they may be used to advantage in the Central and Northwestern Zones for hedges.

In pruning, it is necessary to thin only the weak wood and keep the plants within bounds, remembering that these roses bloom mostly from old wood, and should not be cut back too severely.

RECOMMENDED HYBRID SWEETBRIERS

AMY ROBSART.

Bright rose; medium size. Foliage fragrant. Very vigorous.

ANNE OF GEIERSTEIN.

Dark crimson; large size. Foliage fragrant. Very vigorous.

BRENDA (syns. Maiden's Blush; Peach).

Peach-blossom pink; medium size. Foliage fragrant. Very vigorous.

CATHERINE SEYTON.

Soft, rosy pink; medium size. Very vigorous.

EDITH BELLENDEN.

Pale rose. Very vigorous.

FLORA McIVOR.

White, suffused rose; small; fragrant. Very vigorous.

GREEN MANTLE.

Rose-red. Especially good for hedges. Very vigorous.

JEANNIE DEANS.

Scarlet-crimson; semi-double, large. Very vigorous.

JULIA MANNERING.

Soft pearly pink. Very vigorous.

LADY PENZANCE. (*R. rubiginosa* × Jaune Bicolore.)

Soft copper; single. Medium growth only for this class.

LORD PENZANCE. (*R. rubiginosa* × Harison's Yellow.)

Fawn, shaded salmon. Medium growth only for this class.

LUCY ASHTON.

Pure white, pink edges. Very vigorous.

MEG MERRILIES.

Crimson. Very vigorous.

ROSA RUBIGINOSA.

This is the Wild English Sweetbrier, from which were bred the Lord Penzance hybrids. Very hardy. Light pink flowers in small clusters. Especially noted for the fine fragrance of its foliage. One blooming season only.

ROSE BRADWARDINE.

Clear pink; semi-double. Foliage very fragrant. Very vigorous.

THE MOSS ROSES

These old favorites are exceedingly hardy and are noted for delightful fragrance as well as the attractive moss clothing the bud and making a pleasant contrast with the brightly colored flowers. They seldom give more than a single burst of bloom and are most useful in the Northern Zones.

They should be pruned on the same general

lines as the Hybrid Perpetuals, except that they must not be cut back so severely, moderate pruning being sufficient.

The best varieties are:

ANNI WELTER. Welter, 1906.

Dark red; double; well mossed. Vigorous.

COMTESSE DE MURINAIS. Vibert, 1827.

White to blush; fragrant; well mossed. Vigorous.

Recommended in Ontario, Canada, by the Rev. A. H. Scott, in 1916 American Rose Annual.

CHAPEAU DE NAPOLEON (syn. Crested Moss).

Light rose-pink; fragrant; well mossed. Medium growth.

LITTLE GEM. W. Paul, 1880.

Crimson; small; well mossed. Medium growth.

SALET. Lacharme, 1854.

Rosy pink, very double; fragrant. Vigorous, but inclined to be spindly and varies in production, occasionally giving very fine results, often disappointing in number of blooms. It would seem that pegging down after the spring bloom would secure a better crop of flowers the following year.

THE ROSE SPECIES

There are other classes of roses which include a few varieties worth cultivating, and where these are climbers they have been described in that section.

In addition to those classes already described in this chapter, the species, or so-called "wild roses," are very important, and many of them are useful. The American Rose Annual of 1918 contains an excellent illustrated article on the native species of

America written by the well-known Washington rosarian, Charles E. F. Gersdorff.

In the 1922 American Rose Annual, Mr. McFarland has tabulated valuable information under the heading of "Roses as Shrubs," and there are other articles on species in Annuals of other years.

In addition to the species themselves, there have been some very interesting crosses between them made by the late Dr. Van Fleet, which are also treated of in the Annual. An arrangement has been made with the Department of Agriculture, by the American Rose Society, whereby these posthumous productions of that great hybridizer will be placed in commerce, beginning in 1924 with the Wichuraiana hybrid, Mary Wallace, and following in 1925 with a single Moyesii hybrid, Heart of Gold. The best of the climbing roses which were bred by Dr. Van Fleet have been included in the lists, and are of great value.

The catalogue of Bobbink & Atkins, of Rutherford, New Jersey, contains the largest collection of rose species as well as of the climbing roses, and gives valuable information concerning them. Application for it is suggested.

The most important of the species and of other roses which are not described under their separate class headings follow:

150 ROSES FOR ALL AMERICAN CLIMATES

The initials after each rose indicate the section suggested: thus, N. Northern; Cen., Central; S.-E., Southeastern; Pac. N.-W., Pacific Northwestern; Pac. S.-W., Pacific Southwestern; I.S., Interior Southern.

ROSA ALPINA (*R. pendulina*). (Europe.) *Extremely hardy*.

Bright red, perfumed, single. Thornless. Vigorous. One season only. Wood greenish brown; fruit orange-red. Very early.
N.

CABBAGE. Centifolia. (Provence.) *Extremely hardy*.

Light rosy pink; large, full; fragrant. [N.]

R. HUGONIS. (Western China.) *Extremely hardy*.

Clear, deep yellow; single, medium to small, produced from laterals. Foliage very lovely, well retained. Wood red and thorny. Very vigorous. Very early. One season only. (Many hybrids of the rose are now under test.)

Mrs. G. H. Payne, of Nebraska, reports this as making a fine hedge. It has also been reported as hardy in northern regions to 36° below zero.

N. Cen. Pac. N.-W. Pac. S.-W. S.-E. I.S.

R. MICROPHYLLA (sometimes known as Keystone). *Fairly hardy*.

Cream-white, semi-double, medium size. Foliage shines as if varnished, nearly evergreen, and well retained.

Makes a fine hedge in Cen. Zone, if supported and with protection, but has only one good blooming period. Recommended for Texas by W. C. Blanks, where it grows for him as a climber and is an everbloomer. [S.-E. I.S. Pac. S.-W.]

MME. PLANTIER. (A.) Plantier, 1835. *Extremely hardy*.

White; fair size, opens flat, with good petalage; spring blooming only; does well in the extreme North, foliage being very fine; slender growth.

Reported from Biddeford, Maine, that nothing else lives but this variety and Rugosa. Used in Florida as an understock, but suckers badly. [N.]

R. ACICULARIS. (Northwestern North America.) *Extremely hardy*.

Deep rose; large size, single. Vigorous. One short blooming season.

Growing naturally north of the Arctic Circle as reported in an article in 1923 Rose Annual by Miss Grace Hill, Berkeley, Calif.
N.

R. LUCIDA (*R. virginiana*). (Eastern North America.) *Very hardy.*

Dark pink; single, large. One blooming season only, but scattered over two months; very profuse. Medium growth. Orange-red fruits after flowers. Wood reddish brown. Makes a fine hedge.

R. LUCIDA ALBA (*R. virginiana*). (Eastern North America.)

White flowers; otherwise similar to *R. lucida*, and useful with it.

R. MACRANTHA. (Southern France.)

Light pink or flesh; large size. Rather shy bloomer, but fine for hedges. One season of bloom, generally late. Popular in England. [Pac. N.-W.]

R. MOYESII. (Western China.)

Oxblood-red. Vigorous grower. One blooming season only. Valuable especially for its deep color, and successfully used by Dr. Van Fleet in producing deep-colored hybrids. Pac. N.-W.

R. RUBRIFOLIA. (Europe.) *Very hardy.*

Pink; single, small. Somewhat shy bloomer—one short blooming season. Useful on account of its very attractive foliage, which is an unusual shade of reddish blue. [N. Cen. Pac. N.-W.]

R. SPINOSISSIMA ALTAICA (commonly known as *R. altaica*). (Europe, Western Asia, and China.) *Extremely hardy.*

Large lemon-white, single flower. Medium to large growth, making a fine rounded bush, lovely when in flower. Vigorous. Foliage well retained. Fruits purple. Blooms only in early summer.

Recommended by W. C. Egan, of Chicago, who calls it the "Northern Cherokee." [N. Cen.]

R. XANTHINA. (Turkestan and Afghanistan.)

Clear yellow flowers. Strong grower. [Pac. N.-W.]

The pruning of species should be carried out on the same lines as that described for the Austrian Briers, and the others noted above should be pruned sparingly.

SPECIAL-PURPOSE ROSES

There are a few dwarf Wichuraianas which have never been popular, although hardy and ever-blooming. Undoubtedly, they are too small for garden decoration, being not compact enough for borders and practically of no cutting value. They might be used in hybridization experiments; in fact, one of them, Iceberg, was bred by the writer with Frau Karl Druschki, and produced Bloomfield Perpetual, a single-flowering, hardy, ever-blooming semi-climber, with a large, white, single flower, introduced by Bobbink & Atkins in 1920. This rose is valuable for hedges in the Central Zone, and also North.

The best known of this class are Iceberg, just noted, and Amber, a yellow variety, both very difficult to secure in this country.

For rock-gardens, there are some very attractive species and subspecies, the largest and best growers of which are noted in the lists. The other sorts are purely decorative, requiring special attention, and have not been listed to any great extent in this country; in fact, many of them are impossible to procure. The best description of this class is given in the interesting book, "Roses," by H. R. Darlington, published by Frederick A. Stokes Company, of New York City.

Rosa gallica, a Damask, is valuable in the shade for decorative purposes in the Pacific Northwestern and Southwestern Zones and to some extent in the Southeastern and Interior Southern Zones. It is single, of medium size, and of a deep solid rose color. The blooms are produced over a long season, and the foliage is everywhere impervious to mildew. A moderate grower, with an extremely short season of bloom in the Central Zone, this rose grows into a large bush on the Pacific Coast and blooms for months.

Roses of other classes which are not noted and described in these lists are believed to be unworthy of special mention for general purposes, though they properly find places in the gardens of collectors.

CHAPTER XIV

TENDER CLIMBING ROSES

THIS class includes the Climbing Hybrid Teas, the Climbing Teas, the Noisettes, some China varieties, the Cherokees, and a few others. It is treated apart from the hardy climbers because it includes roses which are not hardy in the Central and like zones without winter protection, while many of the roses here discussed are hardy only in Southern Zones where there is little, if any, frost.

The Hybrid Tea climbers are mostly sports of dwarf varieties of the same name, and are not to be depended upon to always come true to climbing and blooming habit. Being, as they are, a reversion, or change, from a dwarf variety, the same law which gave them birth operates to return them to their original habit, while often such climbers do not produce blooms as constantly as their parents. Nevertheless, many of them are most valuable, especially in the South and Southwest, and certain ones, as noted in the descriptions, are more desirable than their dwarf progenitors. In the Central

Zone they cannot be depended upon as in zones with less cold extremes, and must have winter protection there and in the Pacific Northwestern Zone. It will be found difficult to secure plants of some of the varieties mentioned, but such are included because of their extreme value. Efforts are being made to have them secured and propagated to meet the probable demand.

Some Hybrid Tea climbers may be cut back in the zones where they do not winter-kill, and make very vigorous bushes with more blooms than the dwarfs—a practice suggested by Mr. Morris, of the Western Rose Company, California.

The Climbing Teas are mostly distinct, although in a few cases they are sports of dwarf kinds. Outside of Dijon Teas, they are more susceptible to cold than the Hybrid Teas, but are more to be depended upon as bloomers and to retain their foliage better, besides as a class being less subject to mildew than the Hybrid Tea climbers. They have the same faults that pertain to the dwarf Teas, and in cold, damp winds are likely to ball if of heavy petalage. The light-colored varieties are subject to discoloration in dampness and extreme heat.

The Noisette rose was originated in America, but its wood was almost immediately sent to

France, and the greater number of new varieties were developed there. The class varies greatly, some few kinds being hardy as far north as Baltimore. Pactole, a rose now, unfortunately, forgotten, was one of these, and was originally listed by Parsons, and also noted by Ellwanger under the name of La Pactole. Direct evidence is given of this rose by Mrs. Joseph Janney, Jr., of Philadelphia, whose grandmother grew it in Baltimore, although it is at present not catalogued. The only note of this rose in later years is of a test in 1918 in the Washington Rose-Test Gardens.

As a general rule, Noisettes are most tender, and can only be used in the Southern Zones, although experimenters have cultivated them in the Pacific Northwest and have succeeded in growing them with the aid of winter protection. They usually flower in clusters and are seldom of great value for cutting, but their remarkably continuous blooming and vigorous growth render them indispensable in regions where they flourish. The foliage is often larger than that of the Tea, and usually of a more solid and lighter green, and, like Tea foliage, it holds well in long growing seasons. As a usual thing, Noisettes do not ball as quickly as Teas, because they are shorter in bud, and, owing to a flatter form, they open more

readily, so that in dampness they excel the Teas of too great petalage and, per contra, some of them cannot stand extreme heat as well as the many-petaled Teas.

Climbing Chinas differ in hardiness, but as a class need protection in the Central Zones. Like the Teas, they are good bloomers, and generally have remarkably fine foliage, but the newer kinds have thin petalage and are not as a class valuable in heat, while older kinds with more petals are often flat. They should be cultivated only as recommended.

Roses belonging to other classes which are included in the lists will be carefully described as they appear. All of these tender climbers are affected in the same way as other types. They ball or open too quickly, according to substance, petalage, and form; they lose or retain foliage; are subject to mildew; fade or hold their color, just like dwarf varieties.

For brevity, the Hybrid Tea, Tea, and Pernetiana climbing sports are placed in alphabetical order with the other varieties, and their descriptions are not repeated where the dwarf of like name is included in other lists, because they follow the same general characteristics as the dwarf varieties from which they have originated. Therefore, the

earlier descriptions of these roses should be read in order to understand the form and color of the flower, with the realization that the only difference lies in the fact that the variety as here cited is of climbing habit, while the dwarf is a bush rose. If a climber has some special virtue or failing, it is noted as such in the list that follows.

As a general rule, the climbing sport will be adaptable for the same zones as its dwarf parent, with the exception that under hardiness it will have less frost resistance than the dwarf, because the dwarf would, in Northern Zones, be pruned back to a few eyes in the springtime.

RECOMMENDED TENDER CLIMBING ROSES

The initials after each rose indicate the section suggested; thus, N. Northern; Cen., Central; S.-E., Southeastern; Pac. N.-W., Pacific Northwestern; Pac. S.-W., Pacific Southwestern; I.S., Interior Southern.

ALISTER STELLA GRAY (syn. Golden Rambler). (Nois.) Gray, 1894.

Light yellow, in small clusters. Continuous bloomer.

Recommended by F. E. Lester, Mesilla Park, N. Mex., as blooming from frost to frost, or from April to December, and considered the best pillar rose in his garden.

S.-E. Pac. S.-W. I.S.

ARDS ROVER. (Cl.HP.) A. Dickson, 1898.

Dark crimson, shaded maroon; fragrant; large double bloom, with practically but one flowering period. Foliage solid medium green. Very strong growth.

Nearly hardy in Cen. Zone, but liable to winter-kill badly in extreme seasons; should be protected in Philadelphia and further north.

[Cen. Pac. N.-W.]

BELLE LYONNAISE. (Cl.T.) Levet, 1869. (From Gloire de Dijon.)

Lemon-yellow; full, opens flat, but retains center. Does remarkably well in southern part of Cen. Zone on a south wall, with protection. [Cen. (with protection). S.-E. Pac. S.-W. I.S.]

BELLE OF PORTUGAL. (*Rosa gigantea* × *Reine Marie Henriette*; sometimes noted as *R. moschata* × *R. odorata gigantea*.)
Originated at the Botanical Gardens, Lisbon, Portugal.

Soft salmon-pink; very large, often supported singly on long stem. Practically only one blooming season, but remarkably profuse at that time. [Pac. S.-W. S.-E.]

BLACK BOY. (Cl.HT.) Clark, 1919. Etoile de France × Bardou Job.

Deep velvety crimson, shaded blackish maroon, overlaying fiery scarlet; bloom large, semi-double (do not hold their shape well after being cut), produced on long, stiff stem; slight fragrance. Foliage mildew-proof.

Reported as a very vigorous grower in Australia, where it reaches 23 feet in a few years. Being tested by Howard & Smith, Los Angeles, Calif., and shows much promise.

BLOOMFIELD DECORATION. (HW.) Thomas; to be intro. by Bobbink & Atkins. (Sylvia [HW.] × Arndt [Lam].)

Cerise-pink, with white center; large, single (five petals), borne in very beautiful clusters.

Hardy in Cen. Zone, but growth restricted there to 6 feet. In S. Zones grows double that size, and in California blooms every month in the year. Foliage absolutely perfect. Tested since 1915 in Cen. Zone, and three years in Pac. S.-W.

Cen. S.-E. Pac. N.-W. Pac. S.-W. I.S.

CASCADIA. H. Musk. Thomas. (Mme. d'Arblay [H.Musk.] × Bloomfield Abundance [HT].)

Light pink bud; open flower flesh, shell-pink center.

Hardy in Cen. Zone and without protection in Pac. N.-W. Blooms through the entire season in both zones. Growth up to 6 feet in Cen. Zone, giving over one hundred blooms; much larger in Pac. N.-W., where the bloom comes in long clusters, most striking and novel. Won Gold Medal at City of Portland International Rose-Test Garden, 1922, scoring 96 per cent.

Pac. N.-W.

160 ROSES FOR ALL AMERICAN CLIMATES

CELINE FORESTIER. (Nois.) Trouillard, 1842.

Pale yellow, deeper center.

Noted by Ellwanger as the hardiest of the T.'s in Cen. Zone.
Should have protection in Cen. Zone.

CHROMATELLA (syn. Cloth of Gold). (Nois.) Coquereau, 1843.
(From Lamarque.)

Yellow, sulphur edges; full. It is difficult to secure good results with this rose, but it is very beautiful when well grown.

S.-E. Pac. S.-W. I.S.

CLIMBING BRIDESMAID. Cl.T. Dingee & Conard, 1897.

Larger flowers than the dwarf form. [S.-E. Pac. S.-W.

CL. CAPTAIN CHRISTY. (Cl.HT.) Perrier, 1898. Sometimes classed as an HP.

Light silvery pink; double, opens flat. Hardier than most of this class, but shy bloomer; seldom gives fall blooms.

Cen. I.S.

CL. CECILE BRUNNER. (Cl.Poly.) Ardagh. (Sport of the Dwarf Polyantha.) *Not Hardy in Cen. Zone.*

The best climber for the S. Zones for decorative value. A remarkable variety, of most vigorous growth, blooming the entire year with only short rest periods. Foliage absolutely perfect in all conditions. If this rose is cut back severely, it may be kept at any desired size and makes a splendid decorative bush of 5 to 6 feet, with continuous flowering, and is strong enough to grow without support if so pruned. (This applies only to S. Zones.) Recommended for state of Washington by W. E. Sherbrooke, of Kirkland, for long blooming season, fall bloom, good number of blooms, large growth. [S.-E. Pac. N.-W. Pac. S.-W. I.S.

CL. CHATEAU DE CLOS VOUGEOT. (Cl.HT.) Morse, 1920.

This rose is noted in England as having good climbing growth, and same recommendation comes from New South Wales. Foliage is lost early, as on dwarf variety, but on account of its very dark red color is valuable as a sport in this country and superior to the old rose Meteor.

Cen. Pac. N.-W. Pac. S.-W. I.S. S.-E.

CL. CRAMOISI SUPERIEUR. (Cl.C.)

Dark scarlet. Fine foliage and continuous bloom; not a tall grower; train on fence or pillar; does well in shade. Better than the dwarf. [S.-E. Pac. S.-W.



PLATE XVIII. BLOOMFIELD PROGRESS, HT., grown under ideal conditions in Central Zone. (See page 73.)



CL. DEVONIENSIS. (Cl.T.) Pavitt, 1858.

White, suffused blush-pink. Extensively used in S.-E. Zone.
A strong grower. [S.-E. Pac. S.-W.]

CL. ETOILE DE FRANCE. (Cl.HT.) Howard, 1915.

Said to have vigorous climbing habit.
S.-E. Pac. S.-W. I.S. (without too great frost).

CL. GENERAL MACARTHUR. (Cl.HT.)

Dependable. [Pac. N.-W. Pac. S.-W. (in partial shade).]

CL. GRUSS AN TEPLITZ. (Cl.HT.) Storrs & Harrison Co., 1911.

Hardest of the climbing HT. sports. Mildews badly. Blooms through season in Cen. Zone. Takes time to become established. (If plant does not bloom in the second year, root-prune by digging a trench in a circle 4 feet from main stem, which will cause flower-growth the following year.) [Cen. S.-E. I.S.]

CL. HELEN GOULD (syn. Cl. Balduin). (Cl.HT). Good & Reese, 1912.

Bright watermelon-red. Does well in New Orleans.
S.-E. Pac. S.-W.

CL. HOOSIER BEAUTY. (Cl.HT.) Western Rose Co., 1918.

Not profuse, but attractive.
Pac. N.-W. Pac. S.-W. (in shade).

CL. H. V. MACHIN. (Cl.HP.) Howard & Smith, 1922.

In zones recommended for dwarf.

CL. KAISERIN AUGUSTE VIKTORIA. (Cl.HT.) A. Dickson, 1897.

Reliable in every way, and in Cen. Zone preferable to the dwarf on account of its larger growth and greater number of blooms. [Cen. S.-E. Pac. N.-W. Pac. S.-W. I.S.]

CL. KILLARNEY. (Cl.HT.) Reinberg, 1908.

Light pink; good size, opens flat. Foliage particularly liable to mildew.

Valuable only in I.S. or dry climates, without severe frost.

CL. LA FRANCE. (Cl.HT.) P. Henderson, 1893.

Varies. This rose blues in extreme heat. [Cen. I.S.]

CL. LADY ASHTOWN. (Cl.HT.) Bradley, 1909.

Mildews badly; few blooms after spring. [I.S.]

162 ROSES FOR ALL AMERICAN CLIMATES

CL. LADY HILLINGDON. (Cl.T.) Hicks, 1917.

Very fine in Portland, Ore., where it grows vigorously and stands cold well. [S.-E. Pac. N.-W. Pac. S.-W. I.S.]

CL. LADY PIRRIE. (Cl.HT.)

Not tested. Try in Cen. Zone.

Pac. N.-W. S.-E. Pac. S.-W. I.S.

CL. LAURENT CARLE. (Cl.HT.) Rosen.

Has not been tested in this country, but is strongly recommended by Hazlewood Bros., of New South Wales, and should prove of great value in S. Zones. Foliage should be mildew-proof like the dwarf, and is noted as being a vigorous climber. Probably superior to the old rose, Meteor. [S.-E. Pac. S.-W. I.S.]

CL. LIBERTY. (Cl.HT.) H. B. May, 1908.

Velvety crimson; good bloomer.

[Pac. N.-W.]

CL. LIEUT. CHAURE. (Cl.HT.) Fairley.

Not tested. Try in zones recommended for dwarf.

CL. LOS ANGELES. (Cl.HT.) Howard & Smith.

Very fine grower and bloomer, nearly all plants in nursery showing good climbing habit. Not tested, except in Pac. S.-W. Pac. S.-W. Try Pac. N.-W.

CL. MAMAN COCHET. (Cl.T.) Howard & Smith, 1915.

Wonderful climber where there is not too much frost. Foliage splendid and bloom most prolific and continuous. Does well in shade, and does not mildew. By all odds the best cutting pink climber for zones noted. [S.-E. Pac. S.-W. I.S.]

CL. MARQUIS DE SINETY. (Cl.HT.) Griffon, 1911.

Deep orange, sometimes with red shading; attractive form. As a dwarf is a poor grower and winter-kills easily in Cen. Zone. Not tested, except New South Wales.

Try S.-E. Pac. N.-W. Pac. S.-W. I.S.

CL. MME. ABEL CHATENAY. (Cl.HT.) Easlea, 1916.

Larger flowers than the dwarf, and an improvement over it. S.-E. Pac. S.-W. I.S.

CL. MME. CAROLINE TESTOUT. (Cl.HT.) Chauvry, 1901.

One of the best. Only fair in Cen. Zone; susceptible to mildew. Cen. Pac. N.-W. Pac. S.-W.

CL. MME. EDOUARD HERRIOT. (Cl.AB. [Per.]) Ketten Bros., 1921.

Try in zones recommended for dwarf. Advices from various sources show that a serious percentage of this rose fails to give climbing habit.

CL. MME. JULES GROLEZ. (Cl.HT.) Gamon, 1911.

By all odds the very best bloomer in this class for the Cen. Zone. Very good foliage.

Catalogued by Dingee & Conard.

Cen. Pac. N.-W. S.-E. Pac. S.-W. I.S.

CL. MME. MELANIE SOUPERT. (Cl.HT.) Burrell & Co., 1914.

Not hardy in Cen. Zone, but has remarkably beautiful flowers; stems also good. [S.-E. Pac. S.-W. I.S.]

CL. MRS. AARON WARD. (Cl.HT.) A. Dickson, 1922.

Not tested. Try in zones recommended for dwarf. Various advices show that this rose gives good climbing habit in the majority of cases.

CL. MRS. GEORGE SHAWYER. (Cl.HT.)

Mildews badly.

Specially recommended for I.S.

CL. MRS. W. J. GRANT (syn. Cl. Belle Siebrecht). (Cl.HT.) Paul, 1899.

Imperial pink; good form.

Specially recommended by E. M. Rosenbluth, of Pennsylvania.

Cen. Pac. N.-W. Pac. S.-W.

CL. NIPHETOS. (Cl.T.)

Pure white; long bud; does not ball, but discolored by rain. Medium foliage. Better as a climber than a dwarf, and adapted only to climates without much frost or for use in greenhouse culture. The flowering is continuous.

S.-E. (southern parts). Pac. S.-W.

CL. OPHELIA. (Cl.HT.) A. Dickson, 1920.

Very reliable. In great heat, this rose opens flat. If possible, should be given partial shade in S. Zones.

S.-E. Pac. N.-W. Pac. S.-W. I.S.

CL. PAPA GONTIER. (Cl.T.) Chase & Co., 1905.

Very fine foliage; does not mildew in shade.

S.-E. Pac. S.-W.

164 ROSES FOR ALL AMERICAN CLIMATES

CL. PERLE DES JARDINS. (Cl.T.) J. Henderson, 1889.

Better than the dwarf. Easier to grow than Maréchal Niel, and of much the same color. Balls in ocean climates early and late.

Pac. S.-W. (summer bloom best). S.-E. I.S. (with little frost).

CL. RICHMOND. (Cl.HT.) A. Dickson, 1912.

Reliable.

[Pac. N.-W.]

CL. SAFRANO. (Cl.T.)

Grows to 25 feet in Ojai Valley, Ventura County, Calif.

S.-E. Pac. S.-W.

CL. SOUVENIR OF WOOTTON. (Cl.HT.) Butler, 1899. (Sport of Souvenir of Wootton.)

Continuous bloomer. Has been found very satisfactory in Washington, D. C., and vicinity; one of the best of the climbing Hybrid Tea sports. [S.-E.]

CL. SUNBURST. (Cl.HT.) Howard Rose Co., 1915.

Finer flowers than on the dwarf, of a darker color. Wonderful climber in Pac. S.-W.

Best location is on north side of an arch or pergola, where the rose will receive a certain amount of shade. Recommended for State of Washington by W. E. Sherbrooke, of Kirkland, for long blooming season, fall bloom, good number of blooms, and large growth. [S.-E. Pac. S.-W.]

CL. WHITE MAMAN COCHET. (Cl.T.) Needle & Co., 1911.

Wonderful climber in S. Zones.

[S.-E. Pac. S.-W. I.S.]

CL. WINNIE DAVIS. (Cl.HT.) California Rose Co., 1913.

Light salmon-pink in center, edges cream-flesh; large, fairly full. Strong grower. Good foliage. [S.-E. Pac. S.-W.]

CL. YELLOW CECILE BRUNNER. (Cl. Poly.) (Sport of Climbing Cécile Brunner.)

Deep yellow, opening lemon-yellow, outer edges yellow-cream. Foliage slightly different from the pink climber of the same name, as noted by Mr. Pyle when he visited California. Does not flower as continuously as the pink, and is not as strong a grower. S.-E. Pac. S.-W. I.S.

CLYTEMNESTRA. (H.Musk.) Pemberton, 1915.

Salmon-pink, with yellow glow; semi-double.

Best of this class for Cen. Zone, being more nearly everblooming and hardier, and makes a fine hedge if supported. Foliage holds extremely well.

Cen. (with protection). S.-E. Pac. S.-W. I.S.

DANÆ. (H.Musk.) Pemberton, 1912.

Light yellow to cream; small rosette form, double. Hardier and a better bloomer than Moonlight, which has been discarded. Very vigorous growth. Blooms intermittently after first burst is over. [Cen. I.S.]

DOUBLE WHITE CHEROKEE. (H.Læv.)

Same characteristics as White Cherokee, but with double white flowers. [S.-E. Pac. S.-W.]

DUCHESSE D'AUERSTAEDT. (Nois.) Bernaix, 1888. (From Rêve d'Or.)

Light to deep golden yellow; large form. Remarkably vigorous growth. Blooms constantly in S. Zones. Perhaps darker than parent, but does not open as well in dampness.

FRANCOIS CROUSSE. (Cl.T.) P. Guillot, 1900.

Crimson-cerise, darker shading; globular, but opens loose; bloom varies. Liable to mildew. Remarkably profuse bloomer in Pac. S.-W. [S.-E. Pac. S.-W.]

FELLEMBERG. (Cl.C.) Fellemborg, 1857.

Rosy crimson; double, slightly globular. Good growth. Very fine foliage. Blooms over long period. Kills back in Cen. Zone but lives. Specially recommended in the S. Zones.

FORTUNE'S DOUBLE YELLOW (syn. Beauty of Glazenwood). (Nois.) Fortune, 1845.

Bronze-yellow, splashed red. Wonderful when in bloom, but spring bloomer only. Very vigorous. Supposed to be derived from Cherokee and Banksia. [S.-E. Pac. S.-W. I.S.]

GLOIRE DE DIJON. (Cl.T.) Jacotot, 1853.

Outer petals cream, shading through buff and fawn-yellow to deep salmon-orange center; double. One of the hardiest of the Tea climbers, and gives splendid results in Cen. Zone with protection. Only fault is mildewing badly in damp winds.

Cen. S.-E. Pac. S.-W. I.S.

166 ROSES FOR ALL AMERICAN CLIMATES

GWEN NASH. (Cl.HT.) Clark, 1920.

Cyclamen-pink, with white eye; large, semi-double flower with outer petals beautifully reflexed; lasting; slight fragrance. Foliage black-spots.

Reported from Australia, where it originated, as a vigorous climber and continuous bloomer with some, and as only a spring bloomer with others. Being tested by Howard & Smith, Los Angeles, Calif., and shows great promise.

JAMES SPRUNT. (Cl.C.) Sprunt, 1856; intro. by P. Henderson. (Sport of Agrippina.)

Dark crimson; double, opens trifle loose. Fairly vigorous. One burst of spring bloom, with continuous scattering flowers thereafter. [S.-E. Pac. S.-W. I.S.]

LADY ELEANORE. (Cl.T.) Of unknown origin. (Intro. by Howard & Smith, Los Angeles, Calif.)

Outer petals clear light yellow-cream, splashed rose; inner petals gradually deepening through varying stages of golden melon to copper; open flower often deep bronze-red, varies; very double; opens flat, but center well clothed; balls in damp winds without protection. Foliage mildews.

A hot-weather rose of great individuality and charm; continuous bloomer in S. Zones. Growth up to 8 feet. An intensified climbing Jean Dupuy.

S.-E. Pac. N.-W. and Pac. S.-W., with protection from damp winds near coast, but best adapted for I.S. without great cold extreme.

LAMARQUE. (Nois.) Maréchal, 1830.

White, to light lemon-yellow center; double, opens shallow, but holds center; wonderful bloomer. Retains foliage well, although sparsely clothed. Absolutely dependable in S. Zones.

S.-E. Pac. S.-W. I.S.

LEMON PILLAR. (H.Nois.) G. Paul, 1915.

Pale lemon- to sulphur-yellow; opening large and full. Mildews badly. Not hardy in Cen. Zone. [I.S.]

MARECHAL NIEL. (Nois.) Pradel, 1864.

Deep golden yellow; lovely bud, open flower; fine and double; very fragrant.

A rose that has been tried on many stocks, and is glorious where well grown, which is only possible in favored regions of

S. Zones, where there is no cold, dampness, or scorching heat; very susceptible to frosts; often tried successfully in greenhouses. Gloire de Dijon and Cherokee are two stocks which have done well for this rose. Recommended by Herbert Oldham, president of the Kitsap Rose Society, of Bremerton, Wash., as being successfully grown in that district, where it blooms until July, and is of large growth, although subject to mildew. Some growers throughout the Middle South recommend this variety, among them being Paul C. Lindley, of Pomona, N. C.

MERMAID. (H.Brac.) W. Paul, 1918.

Light sulphur-yellow; stamens amber; large, single blooms. Vigorous grower. Lovely glossy foliage.

Cen. (with protection). Pac. N.-W. (with protection). Pac. S.-W. S.-E. I.S.

MME. ALFRED CARRIERE. (H. Nois.) Schwartz, 1879.

Clear white to silvery flesh, with lightest blush center; opens loose and a trifle flat, but lasts. Wonderful, everblooming, vigorous climber. Foliage mildews in shade or extreme damp, but is indispensable in S. Zones. Not hardy in Cen. Zone.

S.-E. Pac. S.-W. I.S. (where frost does not go below 20°).

MME. JULES GRAVEREAUX. (Cl.T.) Soupert & Notting, 1901. (Rêve d'Or × Viscountess Folkestone.)

Flesh, with faint yellow to peach center; large and double. A climber used in England as an exhibition Tea, and ranked equal twenty-first in English vote for exhibition roses in 1921. Valuable only for collectors or for exhibition.

S.-E. Pac. N.-W. Pac. S.-W. I.S.

MRS. CHARLES GERSDORFF. (Cl.HT.) Gersdorff, 1916. (White climbing rose × Killarney.)

Silvery pink; very large, double; fragrant; mildews. Foliage lasts in long seasons. Very continuous bloomer.

Cen. (with protection). S.-E. Pac. S.-W.

MRS. GEORGE C. THOMAS. (Cl.HT.) Thomas, 1921; intro. by Bobbink & Atkins. (Cl. Mme. Caroline Testout [HT.] × Moonlight [H.Musk].)

Orange bud, opening light salmon-pink, with yellow glow at center, and bright yellow stamens; semi-double.

Hardy in Cen. Zone and blooms until frost. Especially fine for Pac. N.-W. where it won the American Rose Society's Gold

Medal, and Gold Medal of the city of Portland, at Portland Rose-Test Garden in 1921, scoring over 94 per cent. Of only fair value in S. Zones. Foliage sparse. (See color illustration on cover.)

[Cen. Pac. N.-W. Pac. S.-W.]

NOELLA NABONNAND. (Cl.HT.) Nabonnand, 1901. (Reine Marie Henriette [Cl.HT.] × Bardou Job [Cl.Bour.])

Velvety crimson, white center; large, almost single; fragrant. Foliage well retained.

[S.-E. Pac. S.-W. I.S.]

PINK CHEROKEE (H. Læv.) Hockbridge, 1909.

Light pink flowers, otherwise identical with the White Cherokee, except not quite so vigorous.

[S.-E. Pac. S.-W.]

RED CHEROKEE (syn. Ramona). (H.Læv.)

Same habit as the pink variety, but with very dark pink to light red flowers.

[S.-E. Pac. S.-W.]

REINE MARIE HENRIETTE (syn. Red Gloire de Dijon). (Cl.HT.) (Mme. Berard × General Jacqueminot.) Levet, 1878.

Cherry-red; large, opens loose; slight fragrance. Needs protection in northern parts of Cen. Zone. After spring blooming gives only scattering flowers. In Pac. S.-W., gives more continuous bloom. Mildews; foliage lost early.

Cen. S.-E. Pac. S.-W.]

REINE OLGA DE WURTEMBERG. (Cl.HT.) Nabonnand, 1881.

Red; large, attractive blooms. Nice growth and foliage. Fairly hardy; needs protection in Cen. Zone. Recommended in 1918 American Rose Annual by W. C. Blanks, of San Angelo, Texas, for that section.

[Cen. I.S.]

RÊVE D'OR. (Nois.) Ducher, 1869. (From Mme. Schultz.)

Yellow-cream, to deep yellow center; medium size. Foliage well retained. Of remarkably vigorous growth. A very fine climber, blooming continuously. May be trained for hedges or on fences if desired, and when cut back sends forth strong shoots from the main stem and blooms prolifically.

S.-E. Pac. S.-W.]

SOLFATARE (syn. Solfaterre). (H.Nois.) From Lamarque. Boyan, 1843.

Sulphur-yellow; medium to large; good form. Vigorous growth. Foliage very good.

[S.-E.]

TEA RAMBLER. (H.Mult.) G. Paul, 1904.

Coppery pink; profuse bloom; most attractive.

Only fair growth in Philadelphia. Reported to kill to the ground for E. K. Butler, of Jamaica Plain, Mass. Needs protection in Cen. Zone. [Cen.]

WHITE BANKSIA. (Sp.) Kerr, 1807.

White; small, double. Only one season of flowering. Very vigorous in S. Zones, not hardy elsewhere.

S.-E. Pac. S.-W.

WHITE CHEROKEE. (H.Læv.)

White; large, single. Very vigorous in zones without frost, and blooms over a considerable period after first burst in earliest spring in California. Not hardy North. Fine for banks, hedges, and walls. [S.-E. Pac. S.-W.]

WILLIAM ALLEN RICHARDSON. (Nois.) Mme. Ducher, 1878. (Sport from Rêve d'Or.)

Distinct deep orange-yellow, but fades; small to medium.

With protection from cold winds this rose stands more frosts than is generally believed possible, but unless so protected should be grown only in S.-E., Pac. S.-W., or favored districts in I.S.

WINTER CHEER. (Cl.HT.) Pemberton, 1914. (To be propagated by Howard & Smith, Los Angeles, Calif.)

Light crimson, with darker shadings; semi-double.

Fair growth in Cen. Zone, scattering blooms throughout season. Hardy, but is better with protection in Cen. Zone. In Pac. S.-W. blooms more prolifically and over longer season.

Pac. S.-W.

YELLOW BANKSIA. (Sp.) English Horticultural Society, 1824.

Yellow; small, double. Same habit as the White Banksia.

S.-E. Pac. S.-W.

ZEPHIRINE DROUHIN. (H.Bour.) Bizot, 1868.

Bright, clear pink; semi-double; fragrant. Wood almost thornless; growth free. Foliage fine.

Reported as doing very well by Mr. Fish, of New Bedford, Mass., in 1922 Rose Annual, and recommended by Bobbink & Atkins. A favorite rose for pillars and hedges, as noted in publications of English Annual. Blooms well in early summer at

Harrisburg, Pa., and is especially fine in Washington, D. C. Was discarded near Philadelphia for lack of continuous blooming; evidently does best in seacoast climates. Recommended by Hazlewood, of New South Wales, as a remarkably popular climbing or pillar rose, and should therefore do well in S. Zones.

Gen. (seacoast). S.-E. Pac. S.-W. I.S.

PRUNING THE TENDER CLIMBING ROSES

These roses need little pruning beyond the cutting out of dead wood, the removal of crowded canes and laterals, and the general balancing of the growth.

In sections with a long growing season and no frost dormancy, water should be withheld for at least six weeks, and a very light pruning given when watering is renewed. This is necessary as a rest season for the plants, and the reports of roses in Southern Zones dying after three years is caused by the lack of such forced rest seasons where frost does not give natural dormancy.

Much harm may be done by severe cutting back of Teas, Noisettes, and Banksias, not only because such amputation is a severe shock to the plant, but also because these classes bloom in greater part on the laterals and sublaterals.

The new Hybrid Bracteata, Mermaid, needs very different pruning. It may be severely cut back, and will always produce blooms if so treated, so that it may be kept in any size desired.

CHAPTER XV

HARDY CLIMBING ROSES

THE subjoined list of hardy climbers includes those varieties which are really hardy in the Northern Zones, and also other roses which are hardy without winter protection in the Central Zones and in climates with the same cold extremes. Such roses include the Multiflora, Polyantha, Wichuraiana, and Setigera types, the best of their hybrids, and a few other species and hybrids.

As the different climatic zones overlap, so do climbers differ in their hardiness, but all those of which there is any doubt have been placed in the list of tender climbers; only dependable kinds are placed in this division. As explained in the chapter on climate, some of the tender roses may be grown in the Central and Northern Zones with careful winter protection, but for the ordinary grower the attempt is hardly worth while. Mountainous districts in the Southern Zones should use this list of hardier climbers, the guide being the cold extremes as already explained. The lists as given for the Northern and Central Zones will be

sufficient for all but large collectors. Other varieties are of secondary value in most instances, and their descriptions fully explain their characteristics.

As a rule, hardy climbers are restricted to one period of bloom in the Northern and Central Zones, although in long growing seasons, especially in sections having coolness and dampness, some kinds give a second or scattering bloom after the first burst of flowers is over. This is usually found in seacoast districts.

In California, some hardy climbers which give only one great burst of bloom in the Central and Northern Zones, produce a lesser first bloom, and afterward scattering flowers over an extended period, but such roses are not worth while in the Southeastern and the California seacoast, or in the Interior Southern divisions, and of only questionable value in the Pacific Northwest. Bloomfield Decoration, hardy in the Central Zone, blooms practically all the year in the Southwest, and will probably do almost as well in the Southeastern and the Interior Southern Zones.

These recommended hardy climbing roses include sorts of diverse flowering habit as to size and character of bloom, color and maturity of flowers. There are many excellent sorts.

RECOMMENDED HARDY CLIMBING ROSES

The initials after each rose indicate the section suggested: thus, N. Northern; Cen., Central; S.-E., Southeastern; Pac. N.-W., Pacific Northwestern; Pac. S.-W., Pacific Southwestern; I.S., Interior Southern; I.N., Interior Northern.

ALBERIC BARBIER. (HW.) Barbier, 1900. (*Rosa Wichuraiana* × Shirley Hibberd.) *Hardy*.

Yellow, fading to cream; beautiful glossy foliage.

Stood third in English vote of 1923 for climbers. Noted as doing well for E. L. Crane, of Humboldt, S.-E. Neb., and for J. Horace McFarland, of Harrisburg, Pa. [Cen.

ALIDA LOVETT. (HW.) Van Fleet, 1905; intro. by Lovett, 1917.

R. Wichuraiana × Souv. du Président Carnot.) *Very hardy*.

Pale pink, yellow glow at center; fine long buds, good open flower. Very fine foliage. Vigorous; one blooming season only.

N. (with protection). Cen.

AMERICAN PILLAR. (HW.) Van Fleet; intro. by Conard & Jones, 1902. (*R. Wichuraiana* × *R. setigera*.) *Extremely hardy*.

Crimson, pink center, white at base of petals, golden stamens; very large, single. Vigorous grower.

In American Rose Annual's referendum among the first three of the best twelve climbers. In English Annual voted first among climbers in 1923. Reported doing well in Portland, Maine, by Mrs. Walter E. Tobie; also by E. L. Crane, of Humboldt, S.-E. Neb., and recommended for Utah in a questionnaire sent out by the Salt Lake City Chamber of Commerce. Bloomfield Decoration is much superior in S. Zones. [N. Cen.

ANNA MARIA. (H.Set.) Feast, 1843. *Extremely hardy*.

Light pink. Very vigorous.

[N.

AVIATEUR BLERIOT. (HW.) Fauque, 1910. (*R. Wichuraiana* × William Allen Richardson.) *Not as hardy as most of class*.

Saffron-yellow, sometimes with claret splashes; buds small; open flower, light golden yellow, fading to cream; has slight magnolia perfume. Only fairly vigorous grower. Foliage usually lasts.

Equal fourth in English vote on climbers, 1923; included in list of twelve American climbers, American Rose Annual, 1923. Recommended for Syracuse, N. Y., by Dr. Mills. [Cen.

174 ROSES FOR ALL AMERICAN CLIMATES

BALTIMORE BELLE. (H.Set.) Feast, 1843.

Lightest blush. Very vigorous. Supposed to have Noisette blood, and not absolutely hardy. Was at one time the only available light-colored climber. [N. (with protection).

BARONESSE VAN ITTERSUM. (H.Mult.) Leenders, 1911. *Very hardy.*

Light crimson, shaded darker; large, semi-double. Wonderful growth. Splendid first bloom; very shy thereafter. One of the roses recommended by A. J. Fish, of New Bedford, Mass., the authority on climbing roses for his section, and also by the Editor of the American Rose Annual. [N. Cen.

BEAUTY OF THE PRAIRIES (syn. Queen of the Prairies; Prairie Queen; Mme. Caradori-Allan). (H.Set.) Feast, 1843. (*R. setigera* × *R. gallica*.) *Extremely hardy.*

Red, sometimes showing white; double; medium to large. Very vigorous. Foliage lasts. [N.

BESS LOVETT. (HW.) Van Fleet, 1905; intro. by Lovett, 1917. *Very hardy.*

Clear bright crimson; large, double, cupped; fragrant; vigorous. Flowers drop cleanly when they fade, avoiding a "dead" appearance. [N. (with protection). Cen.

BLUSH RAMBLER. (H.Mult.) B. R. Cant, 1903. *Hardy.*

Light blush; semi-double flowers in clusters. Vigorous.

Voted equal fourth among climbers in English Rose Society's list, 1923. [N. (southern parts). Cen.

BONNIE PRINCE. (HW.) T. N. Cook, 1918. Tausendschön seedling × unknown Wichuraiana seedling. *Hardy.*

White, with faint pink blush; double flowers, 1 to 1½ inches in diameter, in large clusters, sometimes numbering thirty. Vigorous, often producing 15- to 20-foot stems in a season. Rich, glossy green foliage that does not mildew. Practically thornless. Almost evergreen in Portland, Ore. Has twice withstood zero temperatures there.

Awarded Silver Medal of City of Portland and Silver Trophy of Portland Rose Society in 1920. Was presented to the Portland Rose Society in 1922 by the originator, with the understanding that all profits derived from sale of the rose are to be devoted to the extension of rose culture in Portland. Distributed in fall of 1924 by Howard & Smith, Los Angeles, Calif., and Henry A. Dreer's, Philadelphia, Pa. [Cen. Pac. N.-W.

CARMINE PILLAR. (Cl.HT.) Paul, 1895. *Quite hardy.*

Rose-pink, with light center; single.

Does better when protected. Much like Hiawatha, but with larger bloom; holds foliage better, but not so hardy. Fairly vigorous growth. [Cen.]

CHRISTINE WRIGHT. (HW.) Hoopes, Bro. & Thomas Co., 1909.

Very hardy. (Unnamed seedling $\times$ Mme. Caroline Testout.)

Silvery wild-rose pink; very large, double, lasting; very beautiful. Strong grower; often long, strong stems.

Good as a standard in Cen. Zone; included in vote of best twelve climbers in American Rose Annual for 1923. Recommended for Syracuse, N. Y., by Dr. Mills. [N. Cen.]

CL. AMERICAN BEAUTY. (HW.) Hoopes, Bro. & Thomas Co., 1909.

(American Beauty $\times$ Marian Dingee $\times$ R. *Wichuriana*.)

Hardy for Cen. Zone; needs protection in North.

Carmine to rich imperial pink—blues in heat, fades quickly; fine buds; large, double flowers, usually on strong stems, and sometimes available for cutting. Gives one large burst of bloom only. Vigorous, foliage usually lost early.

Does well in Charleston, W. Va., for Mrs. C. A. Payne. Reported to give long blooming season in Cheyenne, Wyo. Recommended for Utah in questionnaire sent out by Salt Lake City Chamber of Commerce; also recommended by the Westover Nurseries, Clayton, Mo. Reported by the Rev. J. A. B. Oglevee, of Caldwell, Kans., as doing well for him there, giving a long blooming season, good number of blooms, very large growth, and not losing foliage early; good as a cutting flower.

N. (with protection). I.S.

CL. CLOTILDE SOUPERT. (Cl.Poly.) Dingee & Conard, 1902. (Sport of Dwarf Polyantha.) *Hardiness varies.*

Pearly white, tending to rosy pink; balls very easily.

Mr. Fish, of New Bedford, Mass., feeds the variety liquid manure to force buds to open. Growth seems to vary. Generally everblooming, and undoubtedly will do better in a dry climate, requiring special care to be grown well elsewhere. A splendid illustration of the rule that roses of heavy petalage and light substance ball easily in damp climates. Miss Wilkinson, of Boise, Idaho, reports that this rose is very fine with her, being weighted down with blooms all the season, and without blight.

I.N. (southern parts). I.S.

176 ROSES FOR ALL AMERICAN CLIMATES

CL. ORLEANS. (Cl.Poly.) Levavasseur & Sons, 1913.

Brilliant carmine clusters of double blooms showing white centers, giving the effect of its parent, the well-known Polyantha, Orleans Rose. Foliage poor and lost very early. Continuous bloomer, but of fair growth only.

Reported as of great vigor in Harrisburg, Pa., by J. Horace McFarland, and there blooms sparsely in fall as well as heavily in early summer. [Cen.

CRIMSON RAMBLER. (H.Mult.) Turner, 1893. *Extremely hardy.*

Crimson, fades; small, double flowers, in trusses, opens flat. Growth very vigorous.

Valuable only for its extreme hardiness in dry climates, as it mildews very badly. Excelsa is much superior, and Philadelphia, (Crimson Rambler $\times$ Victor Hugo), is considered far better by many. Recommended by Mrs. H. S. Goodell, of Houghton, Mich. [Interior (especially with altitude). N.

DAWSON. (H.Mult.) Dawson, 1888; intro. by Strong. (*R. multiflora* $\times$ General Jacqueminot twice.) *Very hardy.*

Light pink cupped flowers of medium size, resembling large, double apple blossoms; blooms once only. Vigorous. E. K. Butler, of Jamaica Plain, Mass., states in 1918 Rose Annual that this rose does very well with him. Mr. McFarland reports it as very beautiful at Harrisburg, Pa. [N.

DR. HUEY. (HW.) Thomas; intro. by Bobbink & Atkins and A. N. Pierson, 1920. (Ethel [HW.] $\times$ Grussan Teplitz [HT.].) *Hardy.*

Dark crimson-maroon, with yellow stamens; semi-double, large blooms, borne singly and in clusters, lasting long and never bluing. One blooming period. Mildews in damp conditions.

Noted as doing well for E. L. Crane, of Humboldt, S.-E. Neb. Recommended by the Breck-Robinson Nursery Co., of Lexington, Mass. The Rose Annual editor commends it as a superb pillar rose. [Cen. Pac. N.-W.

DR. W. VAN FLEET. (HW.) Van Fleet, 1910; intro. by P. Henderson & Co., 1910. (*R. Wichuraiana* $\times$ Souvenir du Président Carnot.) *Very hardy.*

Lightest shell-pink to silver-flesh; lovely buds; double flowers on long stems; very distinct and beautiful. One season of bloom, occasional scattering blooms thereafter. Very vigorous; does well as a standard in Cen. Zone.





PLATE XIX. Photographs of selected blooms grown under ideal conditions

1, Grange Colombe, HT.; 2, Lady Ursula, HT.; 3, Safrano, T.; 4, Los Angeles, HT.; 5, Miss Alice de Rothschild, T.; 6, William F. Dreer, HT.; 7, Mrs. Aaron Ward, HT.; 8, Alexander Hill Gray, T.; 9, Lady Roberts, T.; 10, Mrs. Ambrose Ricardo, H.A.B. (Per.); 11, Souvenir de Claudius Pernet, H.A.B. (Per.); 12, Isabella Sprunt, T. (Note how the full flower of No. 8 holds its center, while Safrano [3] and Isabella Sprunt [12] open loose and flat.)

Classed equal first in American Rose Society's list of climbers, 1923. Reported by Mrs. G. H. Payne, of Nebraska, as being hardy. Said to give long blooming season in Cheyenne, Wyo. Recommended for Utah in questionnaire sent out by Salt Lake City Chamber of Commerce. Noted as doing well for E. L. Crane, of Humboldt, S.-E. Neb. [N. Cen.]

DOROTHY PERKINS. (HW.) Jackson & Perkins, 1902. (*R. Wichuraiana* × Mme. Gabriel Luizet.) *Very hardy.*

Soft blush-pink; small to medium size, double, in heavy clusters. Very vigorous.

Included in best twelve climbers in American Rose Annual, 1923; voted equal ninth in English list of climbers, 1923. Recommended for Syracuse, N. Y., by Dr. Mills. Reports from different sections are to the effect that foliage is not satisfactory in S. Zones. Reported as giving long blooming season in Cheyenne, Wyo. Almost identical with Lady Gay. [N. Cen.]

EMILY GRAY. (HW.) Dr. Williams; intro. by B. R. Cant, 1918. (Jersey Beauty [HW.] × Comtesse du Cayla [HC.]) *Hardy.*

Golden yellow—claimed not to fade, open flower remaining ecru. Vigorous. Remarkably fine waxy foliage; young leaves red.

Described by Editor in 1923 American Rose Annual, which includes a letter by the breeder. Equal fourth in English vote for climbers, 1923. Noted as doing well for E. L. Crane, of Humboldt, S.-E. Neb. A. J. Fish, of New Bedford, Mass., reports that all of his plants died. He considers Prof. C. S. Sargent a better and hardier yellow climber. [Pac. N.-W. Cen.]

EVANGELINE. (HW.) Walsh, 1906. (*R. Wichuraiana* × Crimson Rambler.) *Hardy.*

Rosy white, with cameo-pink veining; large, single, lasting, borne freely in clusters on long stems; very fragrant. Foliage dark green, glossy. Very vigorous grower, reaching 12 to 15 feet in height. One season of bloom.

Mildews some at Ithaca, N. Y., as reported by A. C. Beal. Recommended by Mr. McFarland. [N. Cen.]

EXCELSA. (HW.) Walsh, 1908. *Very hardy.*

Brilliant scarlet-crimson; small, double, in clusters; much finer in every way than Crimson Rambler, though not as hardy for the extreme North. Foliage good. Very vigorous.

Recommended for Syracuse, N. Y., by Dr. Mills, and for

178 ROSES FOR ALL AMERICAN CLIMATES

Utah in questionnaire sent out by Salt Lake City Chamber of Commerce. Noted as doing well for E. L. Crane, of Humboldt, S.-E. Neb. Rev. J. A. B. Oglevee, of Caldwell, Kans., reports this as mildewing in his section. [Cen. N. (southern parts).

FARQUHAR. (HW.) Dawson; intro. by R. & J. Farquhar & Co., 1903. (*R. Wichuraiana* × *Crimson Rambler*.) *Extremely hardy*.

Bright pink; small, double flowers, in clusters. Very fine glossy foliage, well retained. Very vigorous. Might be called an early-blooming Dorothy Perkins. [N.

GARDENIA (syn. Hardy Maréchal Niel). (HW.) Manda, 1899. (*R. Wichuraiana* × *Perle des Jardins*.) *Very hardy*.

Bright yellow buds, opening to small cream-white flowers. Glossy foliage, which holds well. Vigorous.

The rose of the same name sent out abroad by Soupert & Notting is inferior. Recommended for Syracuse, N. Y., by Dr. Mills; called good at Harrisburg by Mr. McFarland. [Cen.

GEM OF THE PRAIRIES. (H.Set.) Burgesse, 1860. (*Beauty of the Prairies* × *Mme. Laffay* [HP].) *Very hardy*.

Red, sometimes showing white; fragrant, medium to large. Not as hardy as remainder of the class.

Ellwanger stated that this rose is the only one of the class on which seed is often found in the open air, and suggested it as the best for hybridization—this was, of course, before the day of the Multiflora and *Wichuraiana* hybrids, which have superseded the *Setigera* climbers save in the extreme North. [N.

GERBE ROSE. (HW.) Fauque, 1904. *Very hardy*.

Light flesh-pink; nice bud; flowers large, double. Very strong and vigorous.

Mr. Fish, of New Bedford, Mass., reports two blooming seasons in that section. [Cen. N.

GOLDFINCH (syn. Yellow Tausendschön). (H.Mult.) G. Paul, 1907. (From *Hélène*.) *Extremely hardy; stands cold better than any yellow rose in this class*.

Deep yellow bud, opening light lemon to cream; small, semi-double flowers in clusters. Very vigorous.

Best yellow climber for North. Recommended by Mr. Fish, of New Bedford, Mass., the authority on climbing roses for his section. [N.

GRUSS AN FREUNDORF. (HW.) Praskac, 1913. *Very hardy.*

Bright crimson-maroon, with yellow stamens; semi-double.
Vigorous. Glossy foliage. [Cen.]

HIAWATHA. (HW.) Walsh, 1904. (Crimson Rambler $\times$ Carmine Pillar.) *Very hardy.*

Crimson, white base; single, medium to large. Vigorous.
Foliage lost early.

Recommended for Utah in a questionnaire sent out by Salt Lake City Chamber of Commerce. [N. Cen.]

JEAN GIRIN. (HW.) Girin, 1910. *Very hardy.*

Light salmon-pink, much like Dorothy Perkins, but not quite so hardy.

Likely to give second bloom in seacoast sections, and so reported by the well-known rosarian, the late Admiral Ward, of Long Island. [Cen. (seacoast).]

LEONTINE GERVAIS. (HW.) Barbier, 1903. *Hardy.*

Nasturtium-red, flamed crimson and salmon, yellow glow at base; medium size. Stood twelfth in English Rose Society's 1923 vote on climbers. [Cen.]

MARY LOVETT. (HW.) Van Fleet; intro. by J. T. Lovett, 1915.

(*R. Wichuraiana* $\times$ Kaiserin Auguste Viktoria.) *Very hardy.*

Large, white, waxy, fairly full flowers. Vigorous. Good foliage, often lost early.

Recommended for Syracuse, N. Y., by Dr. Mills.

N. (with protection). Cen.

MILKY WAY. (HW.) Walsh, 1900. *Very hardy.*

The pure waxy white, single flowers, with yellow stamens, are borne in immense clusters. Excellent foliage, well retained. Vigorous.

Commended by Mr. McFarland at Harrisburg, Pa., as hardy and effective. [Cen.]

PAUL'S SCARLET CLIMBER. (HW.) W. Paul, 1916. *Very hardy.*

Bright scarlet-crimson; full; holds form well. Vigorous.

Among the favored climbing roses in American vote for New England, in 1923 Rose Annual; equal first in English vote on climbing roses in 1923. Dr. Mills, of Syracuse, N. Y., advises that this variety lasts three to five weeks, and has good cut-

flower value. Recommended for Utah in questionnaire sent out by Salt Lake City Chamber of Commerce. Noted as doing well for E. L. Crane, of Humboldt, S.-E. Neb. Color so startlingly bright that should not be planted close to any other climber save those of white, yellow, or cream tones.

N. (southern parts). Cen.

PAUL TRANSON. (HW.) Barbier, 1900. *Very hardy*.

Apricot; of fine size for this class; double. Splendid bloomer. Very vigorous. Foliage well retained. [Cen.]

PROF. C. S. SARGENT (not same as Sargent). (HW.) Hoopes, Bro. & Thomas Co., 1903. (*R. Wichuraiana* × *Souvenir d'Auguste Metral* [HT.]) *Very hardy*.

Clear yellow; double.

Good for the North. Recommended by Mr. Fish, of New Bedford, Mass., the authority on climbing roses for his section. Color is darker than that of other yellow hardy climbers, and the rose keeps well. [N.]

PURITY. (HW.) Hoopes, Bro. & Thomas Co., 1917. (Unnamed seedling × Mme. Caroline Testout.) *Very hardy*.

Purest silver-white; large, semi-double; one blooming season. Vigorous growth, varying sometimes, and carrying many large thorns. Foliage good and well held. Very fine when well grown.

Mr. McFarland calls it best white large-flowered climber for central Pennsylvania. [N. (with protection). Cen.]

PURPLE EAST. (H.Mult.) G. Paul, 1901. (Crimson Rambler × *Beauté Inconstante*.) *Very hardy*.

Clear deep pink, with purple shading; large to very large; semi-double. Vigorous. [N. Cen.]

ROSERIE. (H.Mult.) Witterstaetter, 1917. (Sport of *Tausendschön*.) *Very hardy*.

Like its excellent parent, but much darker, and of a more solid color. Wood thornless. [N. Cen.]

ROSA SETIGERA (syn. *Prairie Rose*). (Sp.) (East and Middle West, U. S. A.) *Extremely hardy*.

Single, deep rose, flowers in large clusters. Foliage distinct, rough dark green. Very vigorous. Blooms late in season. The parent of the *Prairie Roses*, and itself very beautiful. [N.]

ROSA WICHURAIANA (syn. Memorial Rose). (Sp.) (Japan.) *Extremely hardy.*

White, with yellow stamens; small, single, in clusters; fragrant. Very glossy foliage, well retained. Trailing habit; climbs well if supported.

The seed parent of many most important large-flowered modern hardy climbers.

Recommended by Mrs. H. S. Goodell, of Houghton, Mich. N.

RUBY QUEEN. (HW.) Van Fleet, 1899; intro. by Conard & Jones. (*R. Wichuraiana* × *Queens Scarlet*.) *Extremely hardy.*

Rich red, white center; large cupped flowers. Very vigorous. Good foliage. [N.]

SANDERS' WHITE. (HW.) Sanders, 1912. *Very hardy.*

Solid clear white.

Reported by A. J. Fish, of New Bedford, Mass., as blooming twice. Included in English list of best twenty-four climbers, 1923. [N. Cen.]

SCHILLER. (Lam.) P. Lambert, 1913. (Trier × Lady Mary Fitzwilliam.) *Very hardy.*

Reddish pink, fading to lighter pink; large clusters of small, double flowers.

One of a new class originated by Peter Lambert, and claimed to be everblooming. So described by Bobbink & Atkins, and quoted by Mr. Fish, of New Bedford, Mass., as blooming twice for him in 1921. It would seem from all obtainable records that this rose does not always bloom more than once, particularly until it has been well established, and then only scattering blooms except in coastal climates. [N. Cen.]

SILVER MOON. (HW.) Van Fleet; intro. by P. Henderson, 1910. (*R. Wichuraiana* × *R. laevigata* [Cherokee Rose].) *Fairly hardy.*

Primrose in its fine buds; open flowers pure waxy white, with yellow stamens; semi-double, very large. Very vigorous. Rich, glossy foliage.

Mrs. G. H. Payne, of Nebraska, reports this as being hardy. Recommended for New York State by Dr. Mills, of Syracuse, and also for Utah in a questionnaire sent out by the Salt Lake City Chamber of Commerce. Noted as doing well for E. L. Crane, of Humboldt, S.-E. Neb. [Cen.]

182 ROSES FOR ALL AMERICAN CLIMATES

SOURCE D'OR. (HW.) Turbat, 1913. *Very hardy.*

Golden yellow in bud; large, double flowers, fading to cream.
Vigorous. Wilts in heat. [Cen.]

TAUSENDSCHÖN. (H.Mult.) Schmidt, 1906. *Extremely hardy.*

Buds bright pink; flower semi-double, cupped, varies when open, being a beautiful combination of colors, including several shades of pink. Very vigorous, with very few thorns.

Recommended for Utah in questionnaire sent out by Salt Lake City Chamber of Commerce. Noted as doing well for E. L. Crane, of Humboldt, S.-E. Neb., and for Mr. McFarland, at Harrisburg, Pa. [N. Cen.]

TRIUMPHANT. (H.Set.) Pierce, 1850. *Extremely hardy.*

Rose-color, small to medium, double. Very vigorous. [N.]

VEILCHENBLAU. (H.Mult.) Schmidt, 1908. *Extremely hardy.*

Light lilac, fading to light purple and blue; double, opens flat, in panicles. Very vigorous. The so-called "Blue Rose," and sometimes used as an understock. [N. Cen.]

WHITE DOROTHY (syn. White Dorothy Perkins). (HW.) B. R. Cant, 1908.

White, with same characteristics as Dorothy Perkins, and probably the best of the white cluster-flowered hardy climbers.

Recommended for Utah in questionnaire sent out by Salt Lake City Chamber of Commerce. [N. Cen.]

WHITE TAUSENDSCHÖN. (H.Mult.) W. Paul, 1913. Sport of Tausendschön.

Has the same characteristics as its parent.

E. K. Butler, of Jamaica Plain, Mass., in 1918 Annual, states that this rose has occasionally a few light pink markings.

N. Cen.

PRUNING THE HARDY CLIMBING ROSES

Practically one rule only may be given for the pruning of all hardy climbers, although some bloom mostly on one-year-old wood and some on that of greater age.

In all cases, save the best of the strong growths of the current year for bloom in following years, and cut out the poorest of the old canes to give room for this new growth, balancing the plant in addition, according to the growth desired.

Wichuraiana climbers give the best bloom on one-year-old wood, as do many of the Polyantha hybrids, while the Multiflora hybrids do best on older growth. The preceding descriptions, giving the parentage, whenever it can be secured, make it easy to follow this suggestion.

New stalks are more likely to winter-kill than the harder wood, and the cutting away of some of the young canes in the early fall, when the growing season is about over, aids the remaining shoots to harden and more easily resist the cold.

The feeding of climbers about six weeks before the end of the growing season is recommended by a number of authorities, with the object of more quickly maturing the growth, and thereby enabling the same to harden before frost; but in such procedure, it would be well not to overdo the feeding, or too soft a growth may result. The grower is advised only to feed in this manner six weeks before the end of the growing season, and to use liquid manure, as specified in the chapter on General Care of Roses.

CHAPTER XVI

THE RUGOSA ROSES

ROSA RUGOSA is a native of Asia, and was first introduced into England from Japan in 1784 by Thunberg. The species has been crossed with our garden roses, and also with other species, and has produced hybrids of great value, especially in the Northern Zones.

The original Rugosas are practically frost-proof, and give one burst of spring bloom with but few blooms thereafter. They are of strong growth, with interesting wrinkled foliage, practically immune from disease. They make good hedges, and are also valuable in the fall and winter for their brilliant red fruits or hips.

The Rugosa hybrids vary in hardiness, depending, naturally, on the characteristics of the other parents, those bred with Rugosas from hardy varieties being usually almost as immune to cold as the type, while those descended from more tender roses are slightly susceptible to low temperatures.

It is evident that Rugosa hybrids are of special

value for our extreme North, by reason of their hardiness. Unfortunately, the demand for Hybrid Teas and Pernetianas has been so insistent in England and France that the Rugosa has not received from the hybridizers the attention it merits. Eventually it will undoubtedly be developed further and be universally used in cold climates.

In addition to their use in the Northern, Central, and Pacific Northwestern Zones, Rugosas and their hybrids are of value on account of their ability to withstand dry and sandy conditions and severe winds, and the fact that their foliage is so perfect is a very important item in their favor, as they require no care and are of vigorous growth. It would seem that this class should be thoroughly tried throughout all our varied conditions, yet at the present time there is no accurate data on what they will do in many parts of the country.

The Rugosas do not compare for cutting with the Hybrid Teas, but for decoration, hedges, and massing are vastly superior. They can easily be so handled as to form fine, symmetrical bushes, much more attractive when out of flower than any of the Hybrid Teas.

It will be noted, in the descriptions following, that the breeding varies greatly, and, undoubtedly,

important developments in the race will eventually occur. The late Dr. Van Fleet bred the Rugosas with many hybrids and species, and secured from the Hybrid Tea some very valuable crosses with the form of the Hybrid Tea, combined with great hardiness, but, unfortunately, with only occasional flowers after the first burst of bloom. Dr. Van Fleet also secured crosses of Rugosa and *Rosa Hugonis*, some of which are most interesting and promising. One or two Rugosas show traces of yellow, but there is no distinct hardy yellow Rugosa, probably the nearest approach being the yet untried Canadian hybrid, Agnes, described as having amber-colored flowers.

In the English Annual of 1915, there is a very interesting and valuable article on Rugosas by H. R. Darlington, which gives the early history of the class and describes the many varieties grown in his garden. Mr. Darlington notes that *Rosa rugosa* has been successfully crossed with other species, and he describes several of the hybrids which he has cultivated. The most valuable Rugosas of such breeding, as well as other sorts of known value, are given in the following list, and where varieties are not known by the writer, the descriptions are those of Mr. Darlington.

The Rugosas should be kept within bounds in

pruning, and ordinary thinning and balancing is sufficient. If desired, they may be cut back close to the ground and allowed to spring from the base, thus completely renewing the plant.

RECOMMENDED RUGOSA ROSE HYBRIDS

The initials after each rose indicate the section suggested: thus, N. Northern; Cen., Central; S.-E., Southeastern; Pac. N.-W., Pacific North-western; Pac. S.-W., Pacific Southwestern; I.S., Interior Southern.

AGNES. Saunders, 1922. (*R. rugosa* × Persian Yellow.)

Pale yellow, outer petals with a delicate creamy salmon hue; bud of good form, opening to flower of fair shape, medium size, double, lasting; strong fragrance. The flowers are borne singly, on short stems, and in great profusion early in June. The habit of the plant and the texture and color of the foliage resemble *R. rugosa*. The bloom resembles that of Conrad Ferdinand Meyer in type.

Has been tested at the Central Experimental Farm, Ottawa, Canada, since 1902, and has never been noticeably injured during winter. Because of its great hardiness, extreme earliness, and distinct and attractive color, this variety should prove a great addition to the Rugosa group. The Central Experimental Farm, the introducers of Agnes, have a few plants available.

N. Cen.

AGNES EMILY CARMAN. Carman 189-. (*R. rugosa* × Harison's Yellow.)

Very brilliant crimson, similar to General Jacqueminot. The brightest of the Rugosas, with characteristic foliage, flower, and habit. Very hardy.

Has not bloomed as freely in California as some of the other Hybrid Rugosas. It is especially recommended by J. Horace McFarland, Editor of the American Rose Annual, Harrisburg, Pa. [N. Cen.]

ALICE ALDRICH. Conard & Jones. (*R. rugosa* × Caroline de Sansal.)

Very hardy.

Clear, light pink; large and double; fairly continuous.

Catalogued by Conard & Jones Co., West Grove, Pa.

N. Cen.

188 ROSES FOR ALL AMERICAN CLIMATES

ATROPURPUREA. G. Paul, 1900. *Exceedingly hardy.*

Blackish maroon to crimson-maroon; single. Very vigorous.
Fruits come late. The best dark Rugosa. [N. Cen.]

BELLE POITEVINE. Bruant, 1895. *Very hardy.*

Rose to magenta-pink; nearly double flowers in trusses. Very vigorous. [N. Cen.]

BLANC DOUBLE DE COUBERT. Cochet-Cochet, 1892. *Very hardy.*

Pure white; semi-double; very fragrant. Very vigorous. Large scarlet fruits. Most popular large, white rose of the class.
N. Cen.

CARMEN. P. Lambert, 1906. (*R. rugosa rosea* × *Princesse de Béarn* [HP.]) *Very hardy.*

Light, clear crimson; single; fragrant. Vigorous. Very continuous. Seldom sets fruit. [N. Cen.]

CHEDANE GUINOISSEAU. Guinoisseau, 1895. *Hardy.*

Dark rose, double; fragrant. Fruits come late. [N. Cen.]

CONRAD FERDINAND MEYER. Müller, 1900. ([*Gloire de Dijon* × *Duc de Rohan*.] × *R. rugosa germanica*.) *Hardy.*

Clear silvery rose; large, full; fragrant. Very vigorous, making canes 6 to 10 feet in a season. Continuous bloomer, although scattering after first burst.

In most extreme North not absolutely hardy. This rose has been tried on its own roots and on budded stock by Mrs. Walter E. Tobie, of Portland, Maine, who reports that it winter-kills in that district.
Cen. Pac. N.-W. Pac. S.-W. I.S.

DANIEL LESUEUR. Müller, 1909. *Hardy.*

Buds salmon-pink to coppery pink; open blooms light yellow, large, double, fair form; fruit in fall. Vigorous, but a poor grower, and should be trained to pillar or fence. Claimed to have T. blood.
[N. (with protection). Cen. Pac. N.-W.]

DELICATA. Cooling, 1898. *Hardy.*

Light pink. Vigorous. (Data from Mr. Darlington.)
N. Cen.

DOLLY VARDEN. W. Paul, 1914. *Fairly hardy.*

Buds show deep yellow, opening light salmon-peach; semi-double; of good shape when half open. Fairly vigorous. Continuous bloomer near Philadelphia. Needs thinning in spring. Evidently with HT. or T. blood. [N. (with protection). Cen.]

- F. J. GROOTENDORST.** (H.Poly.-Rug.) De Goey, 1918. *Very hardy.*
 Red-crimson; double, in clusters, with serrated edges like a carnation. Vigorous. Best as hedges. Continuous bloomer. The first of a race hybridized with the Polyanthas, and of much merit. [N. Cen. Pac. N.-W.]
- FIMBRIATA.** Morlet, 1891. (Mme. Abel Carrière $\times$ *R. rugosa*.)
Fairly hardy.
 Flesh-color; single; edges of petals serrated. Moderate growth. (Data from Mr. Darlington.) [Cen.]
- HANSA.** Schaum, 1905. *Very hardy.*
 Reddish purple; double. Very vigorous. [N. Cen.]
- HILDENBRANDSECK.** P. Lambert, 1909. *Hardy.*
 Silvery-rose; continuous bloomer. No fruits. Very vigorous. (Data from Mr. Darlington.) [Cen.]
- MME. LUCIEN VILLEMINOT.** Gravereaux, 1903. *Hardy.*
 Salmon-rose; double, nearly full; very continuous bloomer. Very vigorous. Has T. blood. (Data from Mr. Darlington.)
 Cen.
- MRS. ANTHONY WATERER.** Waterer, 1898. (Generally given as a cross between General Jacqueminot and *R. rugosa*.) *Very hardy.*
 Carmine; semi-double; fragrant; seldom has fruits. Fairly vigorous. [N. Cen.]
- NEW CENTURY.** Van Fleet, 1900; intro. by Conard & Jones Co. (*R. rugosa alba* $\times$ Clotilde Soupert.) *Hardy.*
 Clear flesh-pink, deeper center, edges often flesh; full, double. Vigorous. [N. Cen.]
- NOVA ZEMBLA.** Mees, 1907. *Very hardy.*
 White or blush-white; large, double; fragrant. Very vigorous. N. Cen.
- ROSE A PARFUM DE L'HAY.** Gravereaux, 1903. *Exceedingly hardy.*
 Dark carmine-crimson; large, double; very fragrant. Vigorous. Has Damask blood. [N. Cen.]
- ROSERAIE DE L'HAY.** Cochet-Cochet, 1901. (Sport of *R. rugosa rosea*.) *Exceedingly hardy.*
 Dark red; double, fragrant. Vigorous.
 Noted in American Rose Annual as continuous bloomer in southern Ontario by Chester D. Wedrick. [N. Cen.]

190 ROSES FOR ALL AMERICAN CLIMATES

RUGOSA ALBA. Thunberg, 1784. *Most hardy.*

White; single, large, borne singly or clusters. Good as a hedge.
Red fruits in fall. [N. Cen.]

RUGOSA MAGNIFICA. Van Fleet; intro. by Conard & Jones Co., 1905. (*R. rugosa* × *Ards Rover*.) *Very hardy.*

Dark to brilliant carmine; large; fragrant. Claimed to be continuous bloomer from spring to frost. Catalogued by Conard & Jones Co., West Grove, Pa. [Cen.]

RUGOSA REPENS ROSEA. *Most hardy.*

Very large, single, rose-colored flowers. Very vigorous.
N. Cen.

RUGOSA RUBRA (syn. *Regeliana*). Lee & Kennedy, 1796. *Most hardy.*

Single red; varies. Fruits in fall. [N. Cen. Pac. N.-W.]

SIR THOMAS LIPTON. Van Fleet, 1900; intro. by Conard & Jones Co. (*R. rugosa* × *Clotilde Soupert*.) *Hardy.*

Pure white; double; noted as continuous bloomer by Chester D. Wedrick in southern Ontario. Catalogued by Conard & Jones Co. [N. Cen.]

THUSNELDA. Müller, 1889. *Hardy.* (Sometimes given as a cross of *R. rugosa alba* and *Gloire de Dijon*.)

Pale salmon-pink; semi-double; continuous bloomer. Claimed to have T. blood. Vigorous. [Cen.]

SPECIES HYBRIDS AS DESCRIBED BY MR. DARLINGTON

RUGOSA × ACICULARIS.

Single, crimson-lake flowers in spring and fall. Strong grower. Pea-shaped fruits. From Japan.

RUGOSA × FEDSCHENKOANA.

Light-colored trusses. In fall bears flowers and fruits together. Strong grower.

RUGOSA × FOLIOLOSA.

Rose-pink. No berries. Small growth. Constantly in flower.

RUGOSA × HUMILIS.

Crimson. Good for hedge. No berries.

RUGOSA × LUTEA.

Cream to white; small trusses, single, or nearly so. Dwarf grower. No berries.

CHAPTER XVII

THE DWARF POLYANTHA ROSES

THESE rather modern roses are more nearly everblooming than any others, and on account of their dwarf growth are quite valuable for borders and edging. The Polyanthas are generally hybrids between a dwarf form of *Rosa multiflora* and various other roses, and a few varieties include Austrian Brier blood. The first of the class was Cécile Brunner, sent out by Mme. Ducher in 1881, and still the best of its color.

The growth on most varieties is quite compact, but the foliage varies greatly, some kinds being extremely susceptible to mildew. The flowers usually come in sprays, trusses, or corymbs, each individual blossom being of small to very small size. With a few exceptions, the class may be divided into two distinct types, one of which is either semi-double or double, with short, flat buds that open into shallow, cupped flowers, generally coming in large clusters. The other division produces a perfect miniature rose, beautifully formed, with a long, spiral bud and a lovely half-open

flower, which is very attractive even when fully matured, this type being usually produced in small sprays, but occasionally singly. Neither of these types ball, but the flat forms often discolor very badly, this being especially true of the pinks and whites, some varieties of the latter becoming quite dirty and objectionable.

Such varieties as Tip-Top (syn. Baby Doll), Miss Edith Cavell, and their like are of a different form from the two classes just noted. Tip-Top has a dainty spiral bud, which, however, opens looser than the Cécile Brunner, double-form type, but, nevertheless, is fairly lasting and remarkably pleasing, being quite distinct in form as well as color. Miss Edith Cavell has less petals than the great majority of the cupped division noted above, but otherwise has its characteristics.

A new Polyantha which is springing into notice abroad is Orange King, which Murrell, of Roseacre, England, describes as "quite a new break in color, although the individual flowers are very tiny and the cluster not over big." The color is suggested in the name.

While the Dwarf Polyanthas are generally valuable, except for color effect, those of the Cécile Brunner form are much to be preferred. Even if color effect is desired in the flatter varieties,



PLATE XX. Roses in the Northern, Central, and
Pacific Northwestern Zones

1, Chapeau de Napoleon, M., in Central Zone; 2, Conrad Ferdinand Meyer, H. Rug., in Central Zone; 3, Hugh Dickson, H.P., in Northern Zone; 4, J. B. Clark, H.P., in Pacific Northwestern Zone.



they should be chosen from among those which do not fade, and which are immune from mildew.

In pruning, all that is necessary is to thin lightly and to remove the old wood and last year's flower-stems to encourage new growth. In Southern Zones it will be well to do this after the forced summer dormancy, and again in January or earliest spring.

If it is desired to keep these roses very small for borders, it will be advisable to cut them back severely, and, of course, this is more important in the varieties listed as strong growing than with others. In zones with heavy frost, the pruning and size of plants will be established by the amount of winter-killing. For large bushes in the Southern Zones, prune very lightly. Leonie Lamesch, a Tea-Polyantha, will make a fine example of this treatment; but if a large bush is desired of Cécile Brunner it would be better to use the climber and cut back severely rather than to grow the dwarf variety and leave unpruned.

When standards are grown, this class is valuable so cultivated for formal effects.

With protection, it is possible to grow the Polyanthas in all the zones except in the extreme North.

In the lists for zones, a selection of two varieties has been given for each color division, the choices

being made with regard to size of growth and hardiness for the North, foliage for damp climates, fading or discoloration in heat, etc.

Dwarf Polyanthas root and grow most successfully on their own roots, from cuttings. It is not necessary to bud these in their dwarf form, although the climbing sports may be successfully budded.

RECOMMENDED DWARF POLYANTHA ROSES

ÆNNCHEN MÜLLER. Schmidt, 1907. (Crimson Rambler × Georges Pernet.) *Fairly hardy.*

Dark coral-pink; large, cupped, semi-double to double, lasting, borne in clusters; slight fragrance. Foliage dark green, glossy. A vigorous bushy grower, reaching 15 to 20 inches. Blooms freely all season.

Both A. C. Beal and S. C. Hubbard, Ithaca, N. Y., report that it is subject to mildew and freezes to 6 inches. Recommended by J. Horace McFarland, Harrisburg, Pa.

ANNE-MARIE DE MONTRAVEL. (Rambaux, 1879.)

Pure white; double, lovely Cécile Brunner form. Very small growth. Not as continuous as rest of class. One of the oldest varieties.

CECILE BRUNNER. Mme. Ducher, 1881. (Polyantha × Mme. de Tartas.)

Salmon-pink with yellow center and flesh-pink edges; lovely form. Profuse and constant bloomer. Foliage absolutely perfect. Strong grower.

Recommended for Pac. N.-W. by Mr. Currey, of Portland, Ore.

CHATILLON. Nonin, 1923.

Light cerise-pink, white centers, fades brown in great heat; ten to twelve petals; comes in corymbs, about a hundred blooms in a corymb; does not shatter easily; wonderful for cut-flower decoration. Stems strong. Vigorous grower; continuous bloomer.

A remarkable novelty. Procurable from Howard & Smith, Los Angeles, Calif., and from Henry A. Dreer, Philadelphia, Pa.

CORAL CLUSTER. Murrell, 1921. (Sport of Orleans Rose.)

Pale coral-pink, rather a new color, and comes in fairly large trusses; fades in great heat. More susceptible to black-spot than most, which latter fact is confirmed by letter from Hazlewood Brothers, of New South Wales, where, however, it does well in the autumn. Vigorous grower.

EBLOUISSANT. Turbat, 1918.

Brilliant deep velvety red—holds color well; small clusters. Bushy growth. Very good foliage.

ECHO (syn. Baby Tausendschön). P. Lambert, 1914. (Sport of Tausendschön.)

Soft light pink; large, flat, double, in clusters. Foliage mildews. Continuous bloomer. Vigorous grower for this class.

Discolors badly in California. Reported as doing well in Charleston, N. H., by Miss Anna L. Webber, and blooming there after heavy frost.

ERNA TESCHENDORFF. Teschendorff, 1911. (Sport of Mme. Norbert Levavasseur.)

Deep red flowers in clusters. Medium growth.

Used successfully in Ontario, as noted in 1922 Rose Annual by Dr. F. E. Bennett.

ETOILE LUISANTE. Turbat, 1918.

Orange-red bud, opening coral and carmine, base golden yellow, much on the order of Mme. Edouard Herriot. Cécile Brunner form. Doing well in California and well worthy of trial.

EUGENIE LAMESCH (syn. Yellow Baby Rambler). P. Lambert, 1899. (Aglaiia [Poly.] × William Allen Richardson [Nois.])

Nice orange-yellow bud, tinged dark rose, opens flat, double; distinct and lovely perfume. Continuous bloomer; small growth.

GEORGE ELGER. Turbat, 1912.

Golden yellow, opening clear yellow—deepest and most lasting yellow of the class; lovely Cécile Brunner form. Very continuous bloomer. Medium growth.

GRUSS AN AACHEN. Geduldig, 1909.

Flesh-pink, center shaded light yellow; large, very double. Erect, sturdy growth of HT. character.

Good cutting rose, and different from the class. Very continuous bloomer. Prune as an HT. Found hardy and satisfactory at Harrisburg, Pa., by the Editor of the Rose Annual.

196 ROSES FOR ALL AMERICAN CLIMATES

JEANNE D'ARC. Levavasseur, 1909. (Sport of Mme. Norbert Levavasseur.)

White; double, flat flowers in clusters; smaller than Katharina Zeimet, but with very clear color and perfect foliage. Medium growth. Best white of its type in California. Discolors in heat. Continuous bloomer.

JESSIE. Merryweather, 1909. (Sport of Phyllis.)

Cherry-crimson; double, flat flowers, in trusses. Profuse and continuous bloomer. Foliage mildews badly, except in dry climates. Exceptionally hardy.

Recommended for Minneapolis by Theodore Wirth.

JOSEPH GUY (syn. *Lafayette*). Nonin, 1921.

Solid scarlet-crimson—does not blue; large flowers (twenty petals), in clusters. Continuous bloomer. Strong grower. Young foliage shaded red.

KATHARINA ZEIMET. P. Lambert, 1901. (*Etoile de Mai* × Marie Pavic.)

White—fades to brown in heat; double, flat flowers, in clusters—fades; shows black open center in California; fragrant; reported better in East by Secretary Pyle, American Rose Society. Continuous bloomer. Strong growth.

LEONIE LAMESCH. P. Lambert, 1899. (*Aglaia* [Poly.] × Kleiner Alfred [Poly].)

Bright coppery red, golden center; nice bud; medium size, flat, double flowers, often coming singly. Continuous bloomer. Perfect foliage. Large grower.

LOUISE WALTER (syn. *Baby Tausendschön*). Walter; intro. by P. Lambert, 1909. (*Tausendschön* × *Rösel Dach*.)

Pink, changing to rosy carmine. Resembles considerably the standard *Tausendschön*.

MAMAN TURBAT. Turbat, 1911. (Mme. Norbert Levavasseur × Katharina Zeimet.)

China-rose, shaded soft peach-pink; large, fairly double, in clusters. Continuous bloomer. Strong growth.

MARIE PAVIC (syn. *Marie Pavic*). Alégatière, 1888. *Fairly hardy.*

Pale flesh-white, flesh-pink center; large, double, open blooms, borne in clusters on good stems, very lasting; slight fragrance.

Foliage large, abundant, rich green, soft, disease-resistant. Vigorous grower, reaching 15 to 20 inches, very bushy. Blooms profusely in June and at intervals the remainder of the season. Reported by A. C. Beal and S. C. Hubbard, of Ithaca, N. Y., to freeze to 6 inches. Recommended by Mr. McFarland, of Harrisburg, Pa.

MIEZE. P. Lambert, 1909. (Petite Léonie $\times$ Austrian Copper).
Extremely hardy.

Orange-yellow; nice bud; small clusters. Strong growth.

MISS EDITH CAVELL (do not confound with the HT., Edith Cavell.)
Meiderwyk, 1917. (Sport of Orleans Rose.)

Ox-blood red; does not fade or blue; semi-double, cupped, a distinct form. Continuous bloomer. Very fine foliage. Rather small growth.

MRS. W. H. CUTBUSH (syns. Baby Dorothy; Mrs. Taft). Cutbush, 1906. (Sport of Mme. Norbert Levavasseur.)

Peach-pink; medium size, double, flat, in clusters. Continuous bloomer. Strong growth.

Recommended for Pac. N.-W., by Mr. Currey, of Portland, Ore. Noted as grown in Ontario by Dr. F. E. Bennett in 1922 Rose Annual.

ORLEANS. Levavasseur, 1910. (Sport of Mme. Norbert Levavasseur.)

Geranium-red, shaded pink, centers cream-flesh; fairly double, large clusters. Continuous bloomer. Strong growth.

PERLE D'OR (syn. Yellow Cécile Brunner). Dubreuil, 1883. (*R. multiflora* $\times$ Mme. Falcot, [T.])

Nankeen-yellow, orange center; lovely form, double, of Cécile Brunner type. Medium growth. Fine foliage. Continuous bloomer.

Recommended for Pac. N.-W. by J. A. Currey, of Portland, Ore.

PERLE DES ROUGES. Dubreuil, 1896.

Crimson; Cécile Brunner type. Medium growth.

PINK CECILE BRUNNER. Western Rose Co., 1918.

Rose-pink, darker than Cécile Brunner, with darker colored foliage, and not quite as large a grower. Continuous.

Tested only in California. Procurable from Western Rose Company, San Fernando, Calif.

198 ROSES FOR ALL AMERICAN CLIMATES

RÖDHÄTTE (syn. Red Cap). Poulsen, 1912.

Cherry-red; semi-double, large. Continuous bloomer. Foliage mildews in damp conditions. Rather small growth.

TIP-TOP (syn. Baby Doll). P. Lambert, 1909. (Trier $\times$ Austrian Copper.)

Combination of varying colors—soft pink, inner petals cream to golden yellow, outer edges tipped rose; lovely bud, opening with high but loose center, petals often reflexed, lasting. Continuous bloomer. Vigorous. Small to medium growth. Fine foliage. A distinct and desirable rose.

WHITE CECILE BRUNNER. Fauque & Sons, 1909. (Sport from Cécile Brunner.)

Cream-yellow to white, light yellow or fawn center, bleaches when fully open to white cream. Foliage lighter in color than Cécile Brunner. Continuous bloomer. The smallest grower of the Cécile Brunner type. Procurable from Western Rose Company, San Fernando, Calif.

YVONNE RABIER. Turbat, 1910.

White, light yellow center—discolors badly in heat; double, in clusters. Very strong grower. The best White Polyantha at Harrisburg, Pa., as reported by Mr. McFarland.

CHAPTER XVIII

ROSE PROPAGATION AND UNDERSTOCKS

FOR the proper growing of roses, it is desirable, even if not necessary, to understand the methods of their production. Seeds of the wild or native roses produce virtually the same plant as the parent species. When one species has been crossed with another species, subspecies, or with hybrids, the resulting seedlings are hybrids; thus, for all practical purposes, crosses do not perpetuate the same plant as the seed parent. Seeds are, therefore, valueless for the purpose of propagating duplicates of any hybrid variety, though essential to the production of new varieties.

In hybridization, cross-breeding produces seedlings of widely varied character, which must be tested before proof of sufficient value for cultivation is established. Exceedingly few of the average seedlings are of any value.

Many of the present-day roses are the result of several generations of crosses from the original parents, and such hybrids have been found not only to occasionally revert, but also to produce

variations in growth, color, or habit. When such occur, it is easy to propagate the new rose by own-root or budding methods, as hereafter explained, and such variations are usually termed "sports."

The climbing sports are such variations, and a number of popular roses have originated in these mutations from the parent.

Established varieties are multiplied by two main methods: first, by cuttings, producing own-root roses; second, by budding on a stronger understock or root-system.

Cuttings are slips or twigs of the variety desired, plunged to the top bud or eye in wet sand, in which they may form roots, thereby becoming a complete plant of the same habit as the original bush.

Budding requires the selection of a strong young plant of the sort chosen as an understock, and the placing of a dormant bud of the variety desired in a position to unite with this understock, by slitting the bark of the stock for its reception. After growth of the bud has commenced, all shoots or growth, save those from the inserted bud, are removed, and the entire strength of the understock is thus thrown into the bud, which develops rapidly, producing a plant which gives virtually the same habit and flowers as the variety from which it was taken.

The discussion as to the better plants produced by the two methods—budded roses or own-root roses—has raged with more or less vehemence for many years, and outside a few amateur experimenters, the evidence put before the public has been contributed, in most part, by persons who were interested financially in one method or the other. Such evidence, while perhaps mostly sincere, cannot be taken too seriously. The many books on roses go into this subject very fully, each writer usually taking a side and proving it by data and arguments, but such proof is always limited by exceptions.

The average facts taken from all available records give the following data:

Own-root Findings. A great many roses may be successfully propagated as own-root plants. Some roses do as well so grown as by any other method; a few are claimed to do better. Some roses will fail when grown on their own roots.

Practically all types of hardy ramblers, the species and subspecies, do splendidly on their own roots. The strongest of the Hybrid Perpetual, Hybrid Tea, and Tea roses will do well as own-root plants under certain conditions.

Almost all of the strong ramblers and species do as well on their own roots as when budded, and

generally give better results so grown. Certain special roses are cited as doing better as own-root plants than as budded; for example, one authority claims La France does not "ball" in bud when so grown, whereas it does ball with him on the Brier stock.

Nevertheless, outside of the strong-growing hardy ramblers and species, superiority of own-root plants is problematic.

A great many very beautiful weak-growing varieties fail on their own roots. A number of roses do not root well, and are thus difficult to increase by cuttings.

Budded Rose Findings. A great many roses may be successfully propagated by budding. Some roses will do better so grown than by any other method, and certain understocks are superior for certain varieties. No rose will fail when budded.

Practically every rose may be successfully propagated by budding, and when budded will do as well as (or generally better than) own-root plants, always excepting the hardy ramblers and species.

For exhibition roses, the best results are obtained by budding. Weak-growing Hybrid Tea and Tea roses give much finer results when budded, especially in cold climates; moderate growers are improved somewhat.

The weaker Climbing Teas and Noisettes (Maréchal Niel, for instance) are helped when budded, in many cases such roses showing surprising results when worked on a stock especially adapted to them. All but the strongest of the Hybrid Perpetual roses are better budded, and the very strongest are successful only on their own roots under special conditions.

It seems to be generally agreed that the Manetti understock* is best for the Hybrid Perpetuals. The Brier stock is usually adapted to the Teas. Certain Hybrid Tea roses, especially the poorer growers, and some Hybrid Perpetual and Tea roses as well, give exceptionally fine results on the Multiflora. Exhibition Teas have finer flowers on standards.

No rose fails when budded, but best results are obtained by growing on the stock best adapted. To insure success, it is necessary to keep off all sucker growths, and the rose-grower who has not enough industry to do this would not grow roses under any conditions. The depth at which the bud should be planted is also a very important point, as, undoubtedly, different stocks and different conditions require different depths for the best results.

*See page 208 for description of the various understocks.

American rose conditions vary tremendously; we have every variety of climate. There are certain districts where certain types and varieties give very fine results with ordinary methods of cultivation, while in other districts such classes are of little value, and for any kind of a showing at all must have special care. This applies to the growing of such own-root plants as succeed in favorable locations; it does not apply to the growth of budded roses to so great an extent.

The grower who tries to grow all classes of dwarf roses as own-root plants will not succeed as well in all parts of the country as the man who uses only the budded rose.

Undoubtedly, the best understock for every variety has not yet been determined. Certainly there is a large field for improvement in rose stocks, and just as certainly a stock which does well in one climate may not always do well elsewhere.

As a general working rule, except with roses specified under the findings above, budded roses are safer unless own-root plants have been proved to be definitely satisfactory, and even then the budded plants will give as good results.

Own-root and budded plants vary in quality. In speaking of them, one should consider only the best of both, namely, American field-grown plants.

Any roses propagated wholly in greenhouses, especially those from a race of indoor ancestors, are likely to prove inferior. Thus, a rose used for a time wholly indoors as was Ophelia, for example, must "escape" to the garden and be there acclimated.

Imported budded plants are not to be compared to American budded roses, and budded plants grown inside in pots are an abomination.

The Middle Atlantic States grow Hybrid Perpetuals, Hybrid Teas, and Teas badly as own-root plants, compared to those produced by the Pacific Northwest, California, and the belt between the Middle Atlantic States, and the Southeastern Zone about Washington.

Own-root roses, outside of ramblers and species, need for success a climate without extremes of any kind.

As a class, the Hybrid Perpetual is poor as an own-root rose north of Boston in the East; with a few exceptions, the heat-resisting Tea is poor as an own-root in the extreme South, except on the Pacific Coast. The average own-root Hybrid Tea is poor even in the Central Zone and most temperate East, compared with budded plants.

In the Pacific Northwest, good results are obtained with own-root plants of the strongest

Hybrid Perpetual and Hybrid Tea sorts, although even there the budded plants are superior. Own-root Teas are possible, but do not compare with California own-root Teas.

In the seacoast region of southern California, the Tea on its own roots is the best own-root rose in this country, thriving in a climate without extremes of heat, cold, or dryness. It is remarkable in size and growth, as well as in number of blooms, and although it takes time to become established, it eventually rivals its sister climbing Teas, while with little care it blooms the entire year without needing rest, through the forced dormancy produced by withholding water. In the same region, the Hybrid Perpetual and Hybrid Tea sorts are unable to face the extreme of the perpetual growing season with the same equanimity as the Tea, and while they give good results as own-root roses, they do better when budded. With a few exceptions, the Climbing Teas and Noisettes do better on a beneficial understock.

The safest and best varieties and their understocks for Hybrid Perpetual, Hybrid Tea, and Tea roses, are as follows:

For the Middle Atlantic States, and in climates with like extremes: Budded Hybrid Perpetuals, selected budded Hybrid Teas, and Teas.

North of Boston and in climates with like extremes of cold: Selected budded Hybrid Perpetuals and Hybrid Teas.

Around Washington, D. C., and in climates with like extremes: Selected budded Hybrid Perpetuals, budded Hybrid Teas and Teas, all as first choice; selected own-root Hybrid Perpetuals and Hybrid Teas, as second choice.

In the Southern States, except where there are no extremes of heat or dryness: Selected budded Hybrid Perpetuals, Hybrid Teas, and Teas.

In the Pacific Northwest: Budded Hybrid Perpetuals and Hybrid Teas, selected budded Teas, all as first choice; selected own-root Hybrid Perpetuals and Hybrid Teas, as second choice.

In southern California coast region: Budded Hybrid Perpetuals and Hybrid Teas, as first choice over own-root Hybrid Perpetuals and Hybrid Teas. In Teas, budded roses are preferable for the weak growers, but the strongest Teas do as well on their own roots as when on a stock.

In climates where the temperature goes well below zero for continued periods (as shown in the Rose-Zone Map published in the 1920 American Rose Annual), use only the very strongest of the budded Hybrid Perpetual sorts, of course using the Rugosa on its own roots.

Experiments with understocks for budding* are not yet complete enough to give positive findings for all varieties, but, broadly speaking, the best-known stocks may be summarized as follows, as relating to the three classes noted:

BRIER (or DOG ROSE) is good for Hybrid Tea and Tea roses, and is, possibly, hardier against extreme cold than the Multiflora.

MANETTI is best for Hybrid Perpetual sorts.

RUGOSA is second choice for Hybrid Perpetual roses in the North.

MULTIFLORA is best for weak-growing Hybrid Tea and Tea roses in Middle Atlantic States, is,

*The various understocks referred to are thus described in Mr. J. Horace McFarland's "The Rose in America," quoted by permission:

MANETTI (*Rosa chinensis Manetti*) has long been imported from Europe in quantity, and is also grown extensively in California, from cuttings.

MULTIFLORA or JAPANESE MULTIFLORA (*R. multiflora*, Japanese form, possibly *Thunbergiana*) is largely used in the eastern part of America, grown both from seed—the preferable way—and from cuttings.

DOG ROSE, or BRIER (*R. canina*), extensively used in Europe, is but sparingly available in the United States. Brier stocks are grown from seed or from cuttings.

RUGOSA (*R. rugosa*) is the standard stock for tree roses, and is sparingly used for other classes. It is imported from Holland, as well as grown in America.

RAGGED ROBIN, the old Bourbon rose, Gloire des Rosomanes (originated in France by Vibert in 1825, and used as one of the parents of General Jacqueminot by Roussel in 1853), is availed of considerably in California.

MME. PLANTIER, an old and vigorous white rose, variously called a Hybrid China and a Hybrid Noisette, probably the former, is used in Florida and is hardy North.

CHEROKEE (*R. laevigata*) is found to be exceedingly useful in the South; it is not hardy north of Georgia.





PLATE XXI. Left: MME. JULES GRAVEREAUX, Cl.T., in Pacific Northwestern Zone. (See page 167.)
 Right: GLOIRE DE DIJON, Cl.T., on south wall in Central Zone; old plant, two years after moving. (See page 165.)

possibly, not as hardy against cold in the North as Brier, and gives only fair results in California and the Interior South; when properly budded in the collar of seedlings, suckers least of any understock. Mr. Morris, of the Western Rose Company, in the Fernando Valley, California, maintains that this understock is greatly affected by nematodes, which theory would account for its failure in California. This stock does well at West Palm Beach, Florida, where it is reported as being better than Mme. Alfred Carrière or Mme. Plantier. (Mme. Butterfly and Radiance do well on it.)

RAGGED ROBIN has done well in California, but unless carefully eyed, suckers badly; perhaps not as hardy against cold as Brier.

ODORATA* is being extensively used in the West as well as the East. It is particularly easy to work, and is attracting considerable attention. Not thoroughly tested, but being studied by the Department of Agriculture in comparison with other stocks.

A number of other understocks have been found useful in special locations. Cherokee is used by a number of southern growers for Maréchal Niel. Gloire de Dijon is recommended by some English

*ODORATA is a hardier form of *Rosa odorata*, the original Chinese wild rose, and was brought to America through the Department of Agriculture by the late Frank N. Meyer. It was discussed in 1918 by Dr. Van Fleet and in 1919 by Peter Bisset in the American Rose Annual of those years.

rosarians for the same rose. Mme. Plantier has been tried with success for weak-growing dwarf Teas, as has Solfatare. *Rosa coriifolia Fræbeli*, ordinarily known as *R. laxa*, has been grown as a stock in the Central Zone, but has not been of exceptional value. *Rosa rugosa*, which is the stock supplied in many of the roses formerly shipped from Holland, has been largely used for the budding of standards, though many firms have their own special stocks for standards, and have not given any data as to the names of the same. Ragged Robin has at times been used for this work, and some astonishing own-root standards of Radiance have been produced in Florida.

There is a very interesting chapter on understocks for rose propagation in the 1918 American Rose Annual, written by the late Dr. W. Van Fleet, of the Department of Agriculture, Washington, and another similar article in the 1921 Annual, contributed by H. Harold Hume, of Florida.

The logical verdict is easy: By all means propagate the kinds on their own roots which are known to do well so grown in your locality. Do not try to do in the Middle Atlantic States what may be done in the Pacific Northwest, or in California, or Florida, or vice versa.

Do not consider *grafted* roses as of any great

value except to secure quick results; they must not be confounded with budded plants. A grafted rose is one in which the kind desired is spliced on the stock.

Unless for experimental purposes, do not bud roses on understocks untested in your locality, or purchase roses from a distance grown on uncertain stocks.

Reports from various sources in the Lower South continue to state that own-root Tea and Hybrid Tea roses are not satisfactory on their own roots. The latest letter in this connection is received from Panama City, Florida, written by Mrs. H. W. Wolfe.



FIG. 1. Plant of Multiflora, ready for budding

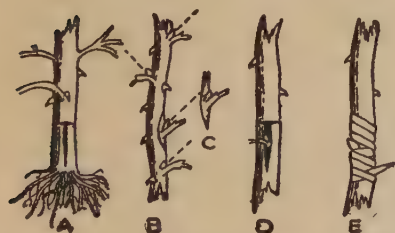


FIG. 2. Detail of rose-budding. *A*, the stock, with slit cut for insertion of bud. *B*, the rose shoot. *C*, bud cut from shoot. *D*, bud inserted in stock. *E*, wrapping of raffia.

Dr. Robert Huey wrote a very instructive article on "Propagation by Budding" in the American Rose Annual of 1917, and the Editor has kindly permitted the use of the informing illustrations in this book, which, as here reprinted, clearly

indicate the method of budding. He lays particular stress, when cutting the bud from the stock, on making the cut from *below* the bud and cutting up, instead of commencing the cut above the bud and going down, as the former method gives a very much stiffer tongue for handling and inserting the bud.

CHAPTER XIX

ROSE-BEDS, PLANTING, AND FIRST CARE

THE proper making of rose-beds may be considered as embodying the same main principles all over the country. The size of the beds depends on the class of roses to be grown and the climatic conditions which control their growth. In England, as well as in America, there have been differences of opinion and interesting discussions as to the best distances apart for planting roses of all sorts.

It may be said that sufficient room must be given so that roots do not overlap, while, on the other hand, there are certain advantages to be gained by planting roses closer together in our hot summers, because the foliage shades the roots from the direct rays of the sun. Therefore, we cannot take the English distances as controlling, except in climates which approximate their conditions. (We may, nevertheless, greatly ameliorate our summer heat by the proper application of mulches, which not only protect the ground from heat, but also retain the moisture.)

In fact, as the growth of roses varies greatly in different parts of the country, no hard and fast spacing rules may be given. Roughly speaking, in the Northern and Central Zones, dwarfs should range in distance apart from 15 to 30 inches, depending on their size. In other regions, they will require from 20 to 40 inches, to make room for their increased growth in the longer growing season.

It is always desirable, if convenient, to see plants of favored varieties growing in the nursery or in the garden of a near-by rose acquaintance. It is thus practicable to determine with considerable accuracy the amount of space required, and the habit of the plant, allowing, of course, for the fact that the nursery plants are smaller than they eventually develop. There can also thus be secured information as to their ultimate size. When the desired kinds cannot be secured near home, one may proceed on the basis that if the rose comes from a zone with a shorter growing season, the plant will need more room than its size would indicate, and vice versa. The vigorous growers are so noted in the lists, and will naturally be placed further apart than medium or small specimens.

The placing of roses in beds is very much a matter of personal preference. Many rosarians

aver that nature's colors never conflict; others contend that the proper grouping of colors is most important, and that some colors clash objectionably; while some critics go so far as to insist upon each variety being planted in its own bed. The arrangement of roses in the "exhibition boxes" so much used in England would seem to offer a suggestion, inasmuch as in most exhibition boxes variously colored roses are placed side by side, and great skill is used in combining these to the best advantage.

The character and size of the plants are perhaps as important as the color scheme, and it would be advisable to place roses of like size by themselves, or else to graduate the sizes by using the larger roses in the center, the medium growers next, and the small-sized varieties on the edges of all beds which are placed in open spaces. When the bed has a wall or heavy planting at its back, so that the approach is from one side only, it would be natural to arrange the smaller roses in front and graduate the others so that the taller kinds are at the back. Also, it would be desirable to place apart any kinds which are particularly susceptible to foliage troubles. To keep different classes of foliage in separate beds also tends to neatness and regularity. Roses for cutting would look better if all together;

decorative varieties, for the obvious reason that they are grown for their effect in the garden, should be placed by themselves.

Where but few plants are cultivated, to place them in one bed may simplify matters, due care being exercised in the points above noted. As the number of beds increase, the planting should be more segregated. In a large collection, the better plan is to plant each bed to one variety.

The writer has one formal rose-garden which is divided into three parts: One for reds and pinks, in which most varieties are in separate beds, the whole being surrounded by red and pink climbers and decoratives. The middle section of this formal garden is for new varieties, and these are planted or budded on stocks already established without regard to color or size, and the surrounding climbers and decoratives are varied also. The third section of this garden is for yellow roses, surrounded by taller kinds of like color. Cutting roses are in the center beds, except in the testing divisions, where there are some exceptions. A second rose-garden is composed of larger beds than the formal garden just noted, and many colors and classes are planted there. There are climbers in the center of some beds, with dwarfs in front of them, and Polyanthas and very small-

growing varieties along the edges. Besides this, there are a great many roses placed along walks and fences throughout the remainder of the grounds, and some varieties are planted in shady locations where they need such treatment.

After growing roses in various ways for many years, it is the writer's advice, as a general rule, to use care in the separation of varied types.

The beds should by all means be made before the arrival of the bushes, not only for the advantage to be gained by quick planting, but so that they may have settled and have been filled up with more soil as may be required.

There are two fundamentals in the making of rose-beds: Composition as affecting drainage and retention of dampness; and composition as relating to plant-food.

In the Northern and Central Zones, and, perhaps, to a lesser degree in the Northwestern, good free drainage is most necessary; first, because after the spring melting of ice and snow, followed by heavy rains, there is a great likelihood of water-logging; second, because the summer and early fall have much rain, and good drainage is then necessary. In the Southern Zones, very free drainage is not required, because during the long, dry summers, especially in the Southwest and

Interior South, and, to some extent at certain times of the year in the Southeast, and also in a lesser degree in the Northwest, the great problem is artificial irrigation, and land which drains too rapidly needs more water, and consequently more labor. Thus, the climate materially controls the drainage of beds, and the retention of dampness in them, just as it affects characteristics in varieties. The conclusion is obvious: Make your beds for your conditions of soil and climate.

In heavy clay soils, or those without free natural drainage, it is necessary in damp conditions, as noted, to provide such free under-drainage. Hill-sides, or land which has roads cut through near the beds, and below their levels, need less drainage than level land; while lowland, of course, should have more artificial drainage. Govern your drainage by the amount of clay in your soil, your climate, and the local situation.

For drainage, dig the bed 3 feet deep, placing 6 inches of crushed or broken stone, ashes, or clinkers in the bottom, and where necessary providing a tile drain with proper grade to carry the water away. Where there is natural drainage in stony, gravelly, or sandy soil, this bottom 6 inches is not needed, and in the Southern Zones is only to be constructed in exceptional cases.

The upper $2\frac{1}{2}$ feet of the average rose-bed should be composed according to Dr. Huey's well-known and well-tried method, which includes one-third good top-soil, one-third subsoil, and one-third well-rotted and leached cow-manure. The whole should be evenly mixed, and if in a country devoid of lime, it is well to add up to a bucketful of ground, air-slaked lime to every 30 feet of bed, width of bed $3\frac{1}{2}$ feet.

The more top-soil used in place of subsoil, the better. In especially heavy clay soils in the Northern, Central, and Northwestern Zones, add at least 10, and not over 30 per cent, of leaf-mold, or Alphano Humus, or Jersey peat. If this is difficult to secure, an increase of 10 per cent in the proportion of manure will furnish additional drainage and needed humus. The cow-manure furnishes the basis of the food for the plants, additional feeding to be given from the surface of the bed by the use of the artificial and natural fertilizers noted in the chapter on General Care.

In all light soils in the Southern Zones, secure clay and add from 10 to 20 per cent, and in especially light soil do the same in the Northern, Central and Pacific Northwestern Zones.

Where alkali exists it is safer to use soil free from this salt.

To recapitulate, and as an average basis, in the Northern and Central Zones plant most dwarfs, except Hybrid Perpetuals, 20 inches apart and 10 inches from the sides and ends of the bed.

Plant all roses noted as large growers in the lists 24 inches apart and 12 inches from sides of bed.

Plant all roses noted as small growers 16 inches apart and 8 inches from sides of bed.

In the Southern and Pacific Northwestern Zones, increase these distances 4 inches in all cases, except for roses which are to be pruned high, in which event plant not less than 30 inches apart.

Plant all average Hybrid Perpetuals 30 inches apart in all zones. Large growers in Southern Zones require up to 40 inches. By staggering the plants, they can be placed equidistant, thus gaining a desirable appearance of compactness.

When large- and small-growing roses are used in one bed, plant all bushes the distance from the sides required by the large plants, and place large and small plants half the combined distance of their ordinary planting intervals apart.

In Northern and Central Zones, roses must not be planted where tree roots interfere. In Southern Zones, shade is beneficial, as noted in lists, but more water is required in irrigation, and tree roots must be removed periodically.

Climbers should have the same treatment as dwarfs, with due allowance for their greater size. A climber requires a bed of at least one-half the length of the spread of its canes, or a minimum of at least 6 feet in length and a width of 2 feet.

The width of beds will naturally depend upon the kind of roses to be grown. Each plant of the same variety should be an equal distance from every other, and half the distance from the side of the bed as it is from other plants. The general practice in the Northern and Central Zones is to make the beds of the required length, to use two rows of plants, and to make the width $3\frac{1}{2}$ feet.

Rose plants upon arrival from the nursery should be handled very carefully. Unpack at once and check carefully; then either heel into the ground and protect from the sun, or else replace in their original wrappings, if such are adequate and are freshened with water. Where the wood of the rose shows a wrinkled and dry appearance, the best method is to at once submerge the plants in tubs of water, which should be of medium temperature and so maintained. Roses coming with balls of soil on their roots should be kept protected and sprinkled until planted, but the ball must not be washed away, or broken by the water or by handling, for if broken the bush is difficult to save.

Before planting roses received with bare roots, all broken roots should be cut off above the break, and very long roots had better be shortened to average length. In the North, budded roses should be planted with the bud not less than 3 inches below the finished ground-level. In the Central, Pacific Northwestern, and Interior Southern Zones, the bud should be planted 2 to 3 inches below the finished ground-level; in the Southern and Southwestern, 2 inches below the finished level suffices. Own-root roses should always be placed just below the marks of the former planting.

In the handling of the plants, it is imperative to keep roses damp in hot weather, protected in cold, and carefully covered at all times so that winds do not cause evaporation and the consequent drying of the roots. Sprinkling of roses in weather without frost is advised to aid in protection.

Holes for final planting should be dug so that all the roots may be spread out and not crossed or in any manner huddled together. Prepare finely pulverized top-soil, mixed in equal parts with bone-meal and either Jersey peat, humus, or leaf-mold, one-third of each ingredient, and when planting sprinkle this compost around the rose roots, using one-third of a bucket of this mixture, as an average, for each dwarf variety, and more for

large specimens and climbers. Pack the ground carefully and firmly around the bush, adding soil as required, until the bush is solidly in place and the bed level. Except in extremely cold conditions, water the plant immediately, and after the bush is settled in place, again add soil as may be needed. If you plant in rain, use canvas covers to protect the bed, and plenty of dry soil prepared in advance aids in easy filling and packing.

With all balled roses, place below level of former plantings, and do not take off covering of the ball, instead cutting the strings around it, and allowing the material to rot. In taking off this covering the ball is almost always broken to a greater or lesser degree, and the roots are disturbed, thus defeating the purpose of the balling. Very large bushes may be easily moved if properly balled and handled, but the essence of success is the protection of the ball, and that it should be of sufficient size.

In exceptionally dry climates in high altitudes with prevalent high winds, it is extremely difficult to get roses started. Mrs. H. E. Young, of Winslow, Arizona, writes of the following method, which is and has proved most successful: After planting and pruning, earth is banked up to completely cover the plants, and for three or four weeks this covering is kept wet continually. By this method,

the rose is protected from evaporation until it secures a good start, and thereafter ordinary care is all that is required.

When planting, it is vitally important to prune back hard, as the roots cannot support all the old growth. Cut back all dwarf varieties to from two to six eyes (save where the plants are balled), always leaving an outside bud at the top. Climbers should be pruned to from six to ten eyes. Balled roses should be cut back from one-quarter to one-half, depending on the season of the year and the condition of the plant, relating also to the size of the ball. If the ball becomes broken, cut back one-half, and with all balled roses which do not speedily show growth, do not check further by repeated shortenings, but wait for growth to show, and then cut to the "break." Frequently balled roses which appear hopelessly dead will send forth strong shoots from the base.

PLATE XXII. Cl. Mme. MELANIE SOWPERT, CHIT, in Central Zone. This plant eventually winter-killed
(See page 163.)





CHAPTER XX

THE GENERAL CARE OF ROSES

DIFFERENT methods are required in the various zones for the main items of rose culture. Taking these up in order, we find that pruning varies greatly and has been dealt with in this book in the descriptions of varieties. It should be noted, in addition, as a part of pruning, that where several flower-buds form close together on one stem, the outside buds should be pinched off with the thumb and finger to secure one more perfect flower for cutting.

All faded flowers should be promptly removed, and in this connection, as well as in the taking of flowers for cutting purposes, the type of rose automatically establishes where the cut should be made. In varieties where later bloom is expected, from one to four eyes should be left below the cut, which should always be made just above a very strong eye. Weak wood, which will have small growths, should be cut back to one or two eyes; strong wood, which will give several good shoots, should be cut to three or four eyes. All cuts should

be made cleanly and as nearly as possible one-half inch above a bud. Horizontal growers should be cut to an eye which leads upward.

In the fall, in zones of extreme cold, all bushes should be cut back to the height of from 1 to 1½ feet for all dwarf varieties, excepting those known to be extremely hardy, and which are intended for garden decoration. In these latter varieties, it would be well to stake during the winter for protection against winds.

Protection in winter is necessary in cold zones, and the hilling up of the earth around the plants, and the adding of soil, litter, or leaves (the latter held in place by wire netting or light boards) is sufficient except in the extreme North. Digging between two roses, bending them over into the hole thus made, and covering them with soil, perhaps gives better protection, but is necessary only in extreme cases. Some authorities recommend thinning the canes the last of the summer in order to make the remainder of the wood develop harder and therefore resist cold better, and this is very advisable among climbers.

Mrs. H. S. Goodell, of Houghton, Michigan, recommends the following method of protection: Dig up the rose, and place the entire plant in a trench at an angle of 45 degrees, protecting by

poles or boards to hold down the twigs. Place one-half foot of straw over this, and one foot of earth over the straw, with a ventilating-pipe in center to carry out moisture (ventilator must have two boards over it like hip-roof to keep out rain and snow). Prune in spring, clean up the roots, and replant. The roses will bloom one week later than those kept in the ground, but those thus put in trenches live many years.

Burlap is a protection against late spring frosts after growing weather. In early frosts, in the fall, protection has been afforded to the flowers themselves by covering with paper bags. This is recommended by Mrs. Frank C. Sumner, of Hartford, Connecticut.

Climbing varieties which are not absolutely hardy should be carefully taken down and covered. Standard roses may be either boxed and protected inside the box with earth or litter, or else they may be bent over by ditching, the tops being carefully covered—the bud, of course, being included in the covering.

For assured protection, the growing of roses in tubs or boxes, plunged in the ground during the summer, which are afterwards lifted and sheltered,—a method seldom used,—is strongly recommended where ordinary protection fails. The placing of

boxes or small kegs or barrels around bushes, and hilling the earth over them, and also inside them, is a very substantial protection. If the plants are covered with waterproof building-paper, the water resulting from freezing and thawing, rain, or moisture from condensation is kept out. This is especially necessary for climbing varieties. Heavy clay is a better protection than lighter soils.

Care must be used in the removal of protection in the spring, and in localities where late frosts are feared, it is advisable to either protect against too early growth, or else to cover where frosts threaten. Such covering need not be very heavy, burlap being usually sufficient. Both protections are urgently advised.

Protection from winds is very necessary in many localities. Shading in extreme heat is well worth while, especially if the varieties are light colored and are to be used for cutting. In England, exhibition roses are shaded, and thereby develop more evenly and hold their form much longer. Such shading protects color as well as shape.

Mulches are a form of protection which is most valuable in the retention of moisture, and which also cuts down the labor of cultivation and weeding. Peat moss spread to a depth of 2 inches after being finely ground is the best mulch. Litter gives nearly





PLATE XXIII. Left: FRAU KARL DRUSCHKE, HP., in Central Zone in spring. (See page 61.)
 Right: 'L. GRUSS AN TEPLITZ, ('L.H.T., in Central Zone in spring. (See page 161.)

the same beneficial results, but is objectionable because it favors the breeding of diseases for the bushes and annoying flies for the owner. Cut grass is of value if nothing else is used; in very sandy soils and those with too free under-drainage, a clay mulch is valuable. The use of mulches is much more necessary in Southern Zones than other districts.

In the Hawaiian Islands, asphalt paper is used as a mulch, not only in pineapple-growing, but also in the protection of other fruits and vegetables. The procedure is to lay the strips of asphalt paper in rolls across the field a few feet apart; holes are then made in the paper and the small pineapple plants put in the ground through the same. Reports give the increase in yield from 25 per cent to 55 per cent, and it would seem that such a mulch might be well tried in the growing of roses, as the paper could be fitted around the plant and pegged down to the side of the bed. Any heavy roofing paper would be worth trial, but the brand used in the Hawaiian trade is manufactured by the Pioneer Paper Company, of 247 South Los Angeles Street, Los Angeles, California. This paper would have the advantage of being easily removed in the fall, thereby not requiring as much labor as the removal of the peat-moss mulch.

The feeding of roses is very necessary, for while the manure in the bed furnishes much food, nevertheless top feed between crops of roses is a distinct help. Manure-water (preferably that made from fresh cow-manure), blood, bone-meal, Alphano Humus, chicken droppings, are among the best fertilizers, and practically all of the new chemical fertilizers are very beneficial. A change in such top feeding is better than any one fertilizer used continuously. In using manure-water, the easiest method is to mix in a five-gallon can, and when using on the plants be sure that the solution is of a dark Ceylon tea color, neither too light nor extremely dark.

Water is most necessary in seasons without rain in the Eastern Central and Northern Zones, as well as in locations where irrigation is part of the summer program. A slow, even flow, which gradually saturates the soil and is conveyed by means of wide furrows, and which in large beds is conveyed by means of wide furrows close together, which are afterward thoroughly covered, is better than a basin for each plant with a narrow connecting ditch and swift flow. Such irrigation is applied as often as the soil commences to dry underneath, and this depends, naturally, on the nature of the soil as well as the under-drainage, but except in

rare cases, a good irrigation should last for at least two weeks. For extensive watering, or for watering of single plants, the main requisite, if furrows are impossible, is to be sure that the water has thoroughly soaked into the ground for considerable depth, and the surface is afterward heavily covered. By turning up the soil near the bushes it will be easily ascertained whether irrigation is necessary.

Clean culture is an essential factor in rose-growing success. One able rosarian has said, "You cannot have the soil too tight about the roots or too loose at the surface," thus indicating the importance of planting firmly and of constant cultivation after growth begins. This cultivation should not be deep; a "dust mulch" of 2 to 3 inches is ideal.

Protection against insects is a very important necessity. "Black-leaf 40," a preparation of nicotine sulphate, procurable at any seed store, is effective for aphids (green lice or fly), thrip (white fly), and some of the small leaf-eaters. For best results, a portion of whale-oil soap should be added to the "Black-leaf 40," as it causes the solution to stick to the foliage for a long time. The following is the solution for aphids, etc.: To 5 gallons of water add 1 ounce of Black-leaf 40, and $7\frac{1}{2}$ ounces of soft soap (whale-oil or fish-oil, preferably).

Hellebore, in the proportion of two tablespoonfuls in a bucket of boiling water, destroys the stronger leaf-eaters and borers. This is sprayed on the plants and is a very effective remedy. Allow the mixture to cool before using.

Rose-bugs are best destroyed by hand-picking, but lately there are several new remedies on the market which are of limited value, the best of which has proved to be "Melrosine," sold by the Garden Chemical Company, of New York. Mr. Pyle, in his excellent book, suggests a "half pound of arsenate of lead in 12 gallons of water." This is of fair value as a protective measure.

Fungous diseases are more difficult to control in damp than in dry climates, and while roses recommended in this book are the most immune sorts to be found with necessary diversity of color, control is advisable at times in all zones. Mildew is a powdery white fungus, and there are several remedies which eradicate it, or even under unfavorable conditions will keep it within bounds. The old remedy of powdered sulphur, to which is added a percentage of lead arsenate and lime, is dependable. The best mixture we have used of this base has been "Lime-Sulphur," manufactured by Sherman & Williams, the component parts of which contain, according to their analysis: 20 per cent

inert ingredients (probably largely made up of gypsum); 80 per cent of active ingredients, of which 63 per cent is calcium poly-sulphide, 5 per cent calcium thio-sulphate, 12 per cent floured sulphur. To this commercial mixture is added 10 per cent by weight of commercial lead arsenate. In using this spray in large quantities, mix 3 pounds of "Lime-Sulphur," as above, to 50 gallons of water, adding 5 ounces of lead arsenate, and for a smaller mixture of 5 gallons of water, use 5 ounces "Lime-Sulphur" and 10 per cent by weight, or $\frac{1}{2}$ ounce, of arsenate of lead.

Bordeaux Mixture is another good remedy for mildew. Its component parts are 7 pounds of commercial "Corona Dry" Bordeaux Mixture, added to 50 gallons of water.

The newest remedy, first mentioned in the 1922 American Rose Annual, as suggested for use in this country by J. A. Currey, of Portland, Oregon, is bicarbonate of soda, or common baking soda, and with us this has been most effective. There are good reports about it from the East as well as from the West. The formula for this is to dissolve 1 to $1\frac{1}{2}$ ounces of bicarbonate of soda in 1 gallon of boiling water, which, of course, is afterward cooled before use. Whale-oil or fish-oil soap added to this as a "sticker" is valuable, as it

causes the spray to adhere to the foliage. (Use $7\frac{1}{2}$ ounces of the soap to 5 gallons of the mixture.)

Another fungus to be watched and fought is black-spot, which is far more difficult to control. The American Rose Society has spent considerable money in experimental tests for a positive cure of this disease, and the articles in the Annual are most valuable. Black-spot occurs more frequently in some varieties than others, and appears first in small black, rusty, or yellow spots on the foliage, which gradually enlarge and eventually cause the leaves to discolor and fall.

In our experience both East and West, and according to the pathologists, there is no possible cure for black-spot, wherefore preventive measures are of great importance, and, indeed, the only method of control. If proper understocks are secured, and varieties subject to black-spot placed by themselves and watched, the disease may be very much more easily kept off the plants. Among these preventive measures, the most important is never to secure any roses which are pot-grown in a greenhouse, or have been propagated by inside cultivation. Also be very wary of roses which are noted as addicted to the ravages of this disease, and if such roses are secured, they should be planted as far as possible from other bushes as well as by themselves,

and the risk from infection from them should be incurred with wide-open and watchful eyes. In addition to this, as a preventive measure, winter spraying of roses where frost produces absolute dormancy, and during enforced dormancy in long growing climates caused by the withholding of irrigation, is very valuable. For this spraying, the strength of the solution used may be increased, and thus becomes much more effective where dormancy is absolute. For dormant spraying use the following formula: Four tablespoonfuls of commercial formaldehyde to 1 gallon of water.

For early spraying in spring before growth, or in bad cases in Southern Zones during forced dormancy, use: Two tablespoonfuls of commercial formaldehyde to 1 gallon of water. This should be used not only to completely saturate the ground around the plant, but also to thoroughly cover all parts of the bushes themselves.

After the commencement of the growing season, the following spray should be used every two weeks as a preventive measure, and more often if the disease manifests itself: One tablespoonful of commercial formaldehyde to 1 gallon of water. This spray was recommended in the *American Florist* from publications of the National Rose Society of England.

In the 1922 American Rose Annual, Dr. L. M. Massey, the Cornell University pathologist who works with the American Rose Society, published a complete study of the black-spot fungus (*Diplocarpon rosæ* Wolf), explaining how it lives over winter and is distributed. He proposes a method of control which, with the permission of the Editor, is here briefly summarized. Bordeaux Mixture, or the ammoniacal copper carbonate solution hereafter recommended, will, if applied *before* any damage appears, prevent black-spot injury. A leaf once attacked by the fungus cannot be "cured," and should be removed and burned. Thus the recommended treatment is preventive only; there is no cure.

The most convenient method of black-spot prevention, and one which also controls mildew, is the dusting treatment. To nine parts of "dusting" sulphur is added one part of dusting lead arsenate, and this mixture is blown over the roses, preferably when they are wet with dew, by suitable hand dusting "gun." If to this mixture is added one part of powdered tobacco stems, aphids and thrips are controlled at the same time.

This dusting must begin before damage appears, and needs to be continued at intervals of two to three weeks all summer. The materials must be



PLATE XXIV. Climbing Roses

1, Tausendschön, Mult.; 2, Milky Way, HW.; 3, Emily Gray, HW.; 4, Cl. American Beauty, HW.; 5, Purity, HW.; 6, Excelsa, HW.; 7, Crimson Rambler, Mult.; 8, Aviateur Blériot, HW.; 9, Alida Lovett, HW.; 10, American Pillar, HW.; 11, Silver Moon, HW.; 12, Dr. W. Van Fleet, HW.



finely ground, indeed must be actually dust, and there are several brands of sulphur and lead arsenate of the requisite fineness. A "dust-gun" may be had for about a dollar.

Mr. Edwin M. Rosenbluth, of Wallingford, Pennsylvania, who has done much work as an amateur in disease prevention, gives the following methods for control of black-spot, and these are published with his permission and also as appearing in the 1922 American Rose Annual.

First. Affected foliage must be removed both from the plants and ground and afterward burned. In an aggravated case, it would be well to first spray with Bordeaux Mixture, using 5 ounces of the paste to a gallon of water.

Second. If late in the season, all foliage should be removed, say within a period of two weeks, and burned.

Third. During the first part of November the beds should receive a very light dressing of commercial sulphate of iron. In severe cases repeat this in the spring, on removing the litter, and use also a light spray of Bordeaux Mixture.

Fourth. About May 5 start spraying lightly with ammoniacal carbonate of copper solution, and repeat every five days or once a week.

Fifth. Insect pests are contributory factors in spreading disease and should be controlled.

Sixth. Varieties particularly susceptible to spot, such as Lyon Rose or Juliet, should be taken out and burned.

Seventh. In severe cases, after the main blooming season in June, spray July 5 with Bordeaux, repeating every three to four weeks. (Suspend copper solution while using Bordeaux.)

Formula for carbonate of copper ammoniacal solution: 5 gallons of water; $\frac{1}{2}$ ounce chemically pure copper carbonate (it is vitally important that this be chemically pure); $4\frac{1}{2}$ ounces ammonia water, 16 degrees or 10 per cent.

238 ROSES FOR ALL AMERICAN CLIMATES

The ammonia is diluted in 7 to 8 parts of water.

The copper solution is made into a paste with little water and then added to the diluted ammonia, after which water is added up to a 5-gallon total.

It is most important that litter should not be allowed on the surface of the beds. Any organic fertilizer used as top-dressing must be thoroughly forked into the bed, and a cover of fresh soil sprinkled over it, as such litter provides a breeding-place for the spores of black-spot, which is the reason that it is brought into evidence in greenhouse plants.

In addition to this, as a preventive measure, it would be well to test the acidity of the soil by means of litmus. If the reaction shows acidity, lime should be added to prevent the soil from becoming sour, as black-spot flourishes abundantly on roses under such conditions. By sprinkling the ground with a light covering of air-slaked lime, and afterward forking this into the soil, then watering the same sparingly, the sourness will be eradicated.

A further preventive measure has been tried by several rosarians in using ordinary ashes around the plant, and even better than this is to give the bush a surface covering of wood ashes. If these rules are adhered to, black-spot may be sufficiently controlled.

It should be noted that damp climates are much

more favorable for black-spot than dry ones, and that in the Interior, where there is great heat and long growing seasons, it is natural for certain roses to shed their leaves. Unless black-spot is plainly evident as outlined, such falling of leaves at the end of a long growing season, or during enforced dormancy, is not to be considered dangerous, but for absolute safety it would be well to send specimens of foliage to the pathologist of the American Rose Society for microscopic examination.

For the good of each amateur rose-grower, it is most necessary to emphasize the fact that the American Rose Society is doing exceptionally valuable work in all phases of rose-culture, and every rose-lover would do well to join the Society for his own good. He receives the American Rose Annual (not obtainable by non-members), which contains most valuable articles for every amateur rose-grower on all subjects connected with the growing of outdoor roses, as well as accurate advance descriptions of new varieties, as they are continually introduced, and the last word on all phases of pruning and disease control, cultivation, etc. Further, the amateur is provided with information as to who are his rose neighbors, thus permitting important and valuable association, and has access to a Committee of Consulting and

Advising Rosarians, of any member of which he may seek advice. He is also furnished with "Standardized Rose Names," a complete checklist of roses in American commerce correctly named and classified. By this list he can label his roses and can also order safely. Membership may be obtained by sending \$3 to the American Rose Society, West Grove, Pa.

The great Annual of the National Rose Society of England is also of much value for the same reasons. Membership in this organization can be arranged through the Secretary of the American Rose Society, addressed as above.

INDEX

- Abel Grand, HP., 55.
 Ennchen Muller, D.Poly., 30, 34, 194.
 Agnes, H.Rug., 31, 34, 166, 187.
 Agnes Emily Carman, H.Rug., 31, 34, 128, 187.
 Agrippina. See Cramoisi Superieur.
 Albéric Barbier, HW., 35, 173.
 Alexander Hill Gray, T., 48, 112.
 Alfred Colomb, HP., 54, 59.
 Alfred K. Williams, HP., 59.
 Alice Aldrich, H.Rug., 187.
 Alida Lovett, HW., 35, 173.
 Alister Stella Gray, Nois., 42, 158.
 Amber, DW., 152.
 American Beauty, HP., 48, 59.
 American Pillar, HW., 31, 36, 173.
 Amy Robsart, H.Sb., 146.
 Anna de Diesbach, HP., 29, 53, 59.
 Anna Maria, H.Set., 173.
 Anna Olivier, T., 113.
 Anne-Marie de Montravel, D.Poly., 31, 194.
 Anne of Geierstein, H.Sb., 146.
 Anni Welter, M., 148.
 Antoine Rivoire, HT., 72.
 Ards Rover, Cl.HP., 35, 158.
 Arethusa, C., 143.
 Arthur de Sansal, HP., 53.
 Asphalt paper as a mulch, 229.
 Aspirant Marcel Rouyer, HT., 72.
 Atropurpurea, H.Rug., 188.
 Augustine Guinoisseau, HT., 70.
 Augustus Hartmann, HT., 41, 72.
 Austrian Briers and their hybrids (Pernetianas) origin of, 127; climate suited to, 130; recommended varieties 132; pruning, 138.
 Austrian Copper, AB., 30, 132.
 Austrian Yellow, AB., 30, 133.
 Aviateur Blériot, HW., 35, 173.
 Avoca, HT., 73.
 Baby Doll, D.Poly., 192, 198.
 Baby Dorothy. See Mrs. W. H. Cutbush.
 Baby Tausendschon. See Echo and Louise Walter.
 Balduin. See Helen Gould.
 "Balling," 6.
 Baltimore Belle, H.Set., 31, 174.
 Baronne Adolphe de Rothschild. See Baroness Rothschild.
 Baronne Prévost, HP., 30, 53, 60.
 Baronne Prévost type, characteristics of, 52; leading varieties of, 53.
 Baroness Rothschild, HP., 30, 60.
 Baronesse van Ittersum, H.Mult., 31, 174.
 Beaute de Lyon, H.AB. (Per.), 133.
 Beauty of Glazenwood. See Fortune's Double Yellow.
 Beauty of the Prairies, H.Set., 31, 174.
 Beauty of Waltham, HP., 54.
 Belle Lyonnaise, Cl.T., 35, 159.
 Belle of Portugal, H.Gig., 46, 159.
 Belle Poitevine, H.Rug., 30, 188.
 Bess Lovett, HW., 35, 174.
 Black Boy, Cl.HT., 159.
 Black-spot discussed, 6, 234; methods for control of, 237.
 Blanc Double de Coubert, H.Rug., 34, 188.
 Bloomfield Abundance, HT., 34, 41, 73.
 Bloomfield Decoration, HW., 39, 42, 46, 50, 159, 172.
 Bloomfield Endurance. See W. Freeland Kendrick.
 Bloomfield Perpetual, 34, 73, 152.
 Bloomfield Progress, HT., 33, 73.
 Blush Maman Cochet. See William R. Smith.
 Blush Rambler, H.Mult., 174.

- Bobbink & Atkins, mentioned, 149, 152.
 Boieldieu, HP., 29, 53, 60.
 Bon Silene, T., 113.
 Bonnie Prince, HW., 174.
 Brenda, H.Sb., 146.
 Bride, T., 113.
 Bridesmaid, T., 37, 113.
 Brightness of Cheshunt, HP., 55.
 Budded vs. own-root roses discussed, 201.
 Budded roses, advantages of, 202.
 Budding process described, 200; operations illustrated, 211.
 Cabbage Rose, Cent., 30, 150.
 Cambrai, H.AB.(Per.), 133.
 Camille Bernardin, HP., 54.
 Candeur Lyonnaise, HP., 29, 60.
 Captain Christy, HP., 54.
 Captain Hayward, HP., 60.
 Cardinal, HT., 74.
 Care of rose plants, on arrival from nursery, 221; after planting, 222; pruning, 225; winter protection, 226; mulching, 228; feeding, 230; watering, 230; cultivating, 231.
 Carmen, H.Rug., 188.
 Carmine Pillar, Cl.HT., 175.
 Caroline de Sansal, HP., 30, 53, 60.
 Cascadia, H.Musk., 42, 159.
 Catherine Mermet, T., 38, 45, 113.
 Catherine Seyton, H.Sb., 146.
 Cécile Brunner, D.Poly., 38, 42, 45, 49, 192, 194.
 Celine Forestier, Nois., 160.
 Central Zone, territory in, 7; rose characteristics for, 8; "cutting" roses for, 33; roses for garden decoration, 34; roses for borders, 34; roses for hedges and massing, 34; climbing roses, 35.
 C. E. Shea, HT., 74.
 Chapeau de Napoleon, M., 148.
 Charles Lefebvre, HP., 54, 60.
 Chateau de Clos Vougeot, HT., 74.
 Chatillon Rose, D.Poly., 45, 194.
 Chédane Guinoisseau, H.Rug., 188.
 China and Bourbon roses, merits of, discussed, 142; recommended varieties, 143; pruning, 143.
 China climbers, discussed, 157.
 Chrissie MacKellar, HT., 34, 74.
 Christine, H.AB.(Per.), 133.
 Christine Wright, HW., 35, 175.
 Chromatella, Nois., 160.
 Cl. Agrippina. See Cl. Cramoisi Superieur.
 Cl. American Beauty, HW., 31, 50, 175.
 Cl. Balduin. See Cl. Helen Gould.
 Cl. Belle Siebrecht. See Cl. Mrs. W. J. Grant.
 Cl. Bridesmaid, Cl.T., 39, 160.
 Cl. Captain Christy, Cl.HT., 160.
 Cl. Cécile Brunner, Cl.Poly., 25, 27, 39, 42, 46, 50, 160.
 Cl. Chateau de Clos Vougeot, Cl.HT., 39, 42, 160.
 Cl. Clotilde Soupert, Cl.Poly., 50, 175.
 Cl. Cramoisi Superieur, Cl.C., 39, 160.
 Cl. Devoniensis, Cl.T., 39, 161.
 Cl. Etoile de France, Cl.HT., 161.
 Cl. General MacArthur, Cl.HT., 42, 46, 161.
 Cl. Gruss an Teplitz, Cl.HT., 35, 50, 161.
 Cl. Helen Gould, Cl.HT., 39, 161.
 Cl. Hoosier Beauty, Cl.HT., 42, 46, 161.
 Cl. H. V. Machin, Cl.HT., 42, 46, 161.
 Cl. Kaiserin Auguste Viktoria, Cl.HT., 35, 39, 42, 46, 50, 161.
 Cl. Killarney, Cl.HT., 161.
 Cl. Lady Ashtown, Cl.HT., 42, 161.
 Cl. Lady Hillingdon, Cl.T., 42, 162.
 Cl. Lady Pirrie, Cl.HT., 42, 162.
 Cl. La France, Cl.HT., 161.
 Cl. Laurent Carle, Cl.HT., 39, 50, 162.

- Cl. Liberty, Cl.HT., 162.
 Cl. Lieut. Chauré, Cl.HT., 162.
 Cl. Los Angeles, Cl.HT., 162.
 Cl. Maman Cochet, Cl.T., 39, 46, 50, 162.
 Cl. Marquis de Sinety, Cl.HT., 162.
 Cl. Mme. Abel Chatenay, Cl.HT., 39, 50, 162.
 Cl. Mme. Caroline Testout, Cl.HT., 42, 46, 162.
 Cl. Mme. Edouard Herriot, Cl.AB. (Per.), 163.
 Cl. Mme. Jules Grolez, Cl.HT., 34, 42, 163.
 Cl. Mme. Mélanie Soupert, Cl.HT., 50, 163.
 Cl. Mrs. Aaron Ward, Cl.HT., 163.
 Cl. Mrs. George Shawyer, Cl.HT., 50, 163.
 Cl. Mrs. W. J. Grant, Cl.HT., 35, 163.
 Cl. Niphotos, Cl.T., 163.
 Cl. Ophelia, Cl.HT., 35, 42, 163.
 Cl. Orleans, Cl.Poly., 34, 176.
 Cl. Papa Gontier, Cl.T., 39, 46, 163.
 Cl. Perle des Jardins, Cl.T., 39, 50, 164.
 Cl. Richmond, Cl.HT., 42, 164.
 Cl. Safrano, Cl.T., 164.
 Cl. Souvenir of Wootton, Cl.HT., 39, 164.
 Cl. Sunburst, Cl.HT., 39, 42, 46, 50, 164.
 Cl. White Maman Cochet, Cl.T., 39, 46, 50, 164.
 Cl. Winnie Davis, Cl.HT., 42, 46, 164.
 Cl. Yellow Cécile Brunner, Cl.Poly., 46, 164.
 Clara Watson, HT., 45, 74.
 Clarice Goodacre, HT., 74.
 Climate, as affecting roses, discussed, 1; climatic zones, 4; extreme cold, 5; extreme heat, 5; dampness, 5; rain, 6; short growing season, 6; long growing season, 6; dryness, 6.
 Climbing roses, characteristics necessary for various zones, 23.
 Climbing roses, hardy, discussed, climate best suited to, 171; recommended varieties, 173; pruning, 182; feeding of, 183.
 Climbing roses, tender, discussed, 154; climate suited to, 154; pruning, 170; recommended varieties, 158.
 Climbing sports, 157; climate best suited to, 158; pruning, 158.
 Clio, HP., 61.
 Cloth of Gold. See Chromatella.
 Clytemnestra, H.Musk., 34, 42, 165.
 Columbia, HT., 41, 75.
 Comtesse de Cassagne, HT., 45, 75.
 Comtesse de Murinais, M., 148.
 Comtesse de Nadaillac, T., 113.
 Comtesse du Cayla, C., 41, 143.
 Comtesse Riza du Parc, T., 114.
 Conrad Ferdinand Meyer, H.Rug., 34, 188.
 Constance, H.AB. (Per.), 133.
 Constance Casson, H.AB. (Per.), 133.
 Coral Cluster, D.Poly., 195.
 Corallina, T., 114.
 Cornelis Timmermans, HT., 75.
 Coronation, HP., 61.
 Courtney Page, HT., 75.
 Cramoisi Supérieur, C., 143.
 Crested Moss. See Chapeau de Napoleon.
 Crimson Bedder, HP., 53.
 Crimson Chatenay, HT., 75.
 Crimson Rambler, H.Mult., 31, 176.
 Currey, Jesse A., mentioned 3; quoted, 233.
 "Cuttings" described, 200.
 Danae, H.Musk., 35, 42, 49, 165.
 Daniel Lesueur, H.Rug., 29, 188.
 Darlington, H. R., cited, 139, 186; book on "Roses," referred to, 152.
 Dawson, H.Mult., 31, 176.
 Dean Hole, HT., 76.

- Decorative roses discussed, 21.
 Delicata, H.Rug., 188.
 Department of Agriculture, mentioned, 149, 209.
 Diadem, HT., 75.
 Dolly Varden, H.Rug., 29, 188.
 Dorothy Perkins, HW., 35, 177.
 Double White Cherokee, H.Læv., 165.
 Dr. Hooker, HP., 55.
 Dr. Huey, HW., 35, 176.
 Dr. W. Van Fleet, HW., 35, 176.
 Ducher, C., 143.
 Duchess of Wellington, HT., 33, 41, 76.
 Duchesse d'Auerstaedt, Nois., 39, 46, 165.
 Duchesse de Brabant, T., 38, 45, 49, 114.
 Duchesse de Vallombrosa, HP., 55.
 Duke of Connaught, HP., 55.
 Duke of Edinburgh, HP., 54.
 Duke of Edinburgh type, characteristics of, 55; leading varieties of, 55.
 Duke of Teck, HP., 55.
 Dupuy Jamain, HP., 54, 61.
 Dwarf Polyantha roses, origin of, 191; characteristics discussed, 191; pruning, 193; climate best suited to, 193; recommended varieties, 194.
 Dwarf Wichuraianas, discussed, 152.
 Eblouissant, D.Poly., 34, 38, 49, 195.
 Ecarlate, HT., 30, 76, 107.
 Echo, D.Poly., 30, 195.
 Edel, HT., 76.
 Edith Bellenden, H.Sb., 146.
 Edward Mawley, HT., 44, 76.
 Eldorado, HT., 77.
 Ellen Willmott, HT., 77.
 Elli Hartmann, HT., 33, 77.
 Ellwanger, H. B., book, "The Rose," quoted, 52.
 Emily Gray, HW., 35, 177.
 Emma Wright, HT., 77.
 Erna Teschendorff, D.Poly., 30, 195.
 Etienne Levet, HP., 54.
 Etoile de France, HT., 37, 48, 77.
 Etoile de Lyon, T., 38, 49, 114.
 Etoile Luisante, D.Poly., 195.
 Eugène Barbier, HP., 29, 61.
 Eugénie Lamesch, D.Poly., 38, 45, 49, 195.
 Evangeline, HW., 31, 35, 177.
 Excelsa, HW., 35, 177.
 Farquhar, HW., 178.
 Fellemberg, Cl.C., 39, 49, 165.
 Fertilizers recommended, 219.
 Fimbriata, H.Rug., 189.
 Fisher et Holmes. See Fisher Holmes.
 Fisher Holmes, HP., 61.
 F. J. Grootendorst, H.Rug., 30, 31, 34, 189.
 Flora McIvor, H.Sb., 146.
 Florence Pemberton, HT., 41, 78.
 Fortune's Double Yellow, Nois., 27, 165.
 Foster-Melliar, A., quoted, 109.
 Francis Scott Key, HT., 78.
 Francois Crousse, Cl.T., 46, 165.
 Francois Michelon, HP., 30, 53, 61.
 Franklin, HT., 78.
 Frau Karl Druschki, HP., 30, 37, 41, 45, 46, 49, 62, 152.
 F. R. Patzer, HT., 78.
 Fungicides recommended, 232.
 Fungous diseases discussed, 231.
 Gardenia, HW., 35, 178.
 Gem of the Prairies, H.Set., 31, 178.
 General Jacqueminot, HP., 29, 54, 55, 62.
 General Jacqueminot type, characteristics of, 53; leading varieties of, 54.
 General MacArthur, HT., 10, 41, 45, 78.
 General-Superior Arnold Janssen, HT., 79.
 Georg Arends, HP., 62.
 George Dickson, HP., 49, 63.

- George Elger, D.Poly., 30, 34, 38, 42, 45, 49, 195.
 Georges Schwartz, T., 114.
 Gerbe Rose, HW., 35, 178.
 Gersdorff, Charles E. F., mentioned, 149.
 Giant of Battles type, characteristics of, 53; leading varieties of, 53.
 Geant des Batailles, HP., 53.
 Gladys Holland, HT., 79.
 Gloire de Chedane-Guinoisseau, HP. 29, 63.
 Gloire de Dijon, Cl.T., 35, 38, 46, 49, 165.
 Gloire des Rosomanes, C., 46, 53, 144.
 Gloire Lyonnaise, HP., 30, 49, 63.
 G. Nabonnand, T., 114.
 Golden Emblem, H.AB.(Per.), 41, 44, 133.
 Golden Ophelia, HT., 48, 79.
 Golden Oriole, T., 38, 45, 49, 115.
 Golden Rambler. See Alister Stella Gray.
 Golden Spray, HT., 79.
 Goldfinch, H.Mult., 31, 178.
 Goodell, Mrs. H. S., quoted, 226.
 Gorgeous, HT., 79, 129.
 Grafted roses discussed, 210.
 Grange Colombe, HT., 41, 80.
 Green Mantle, H.Sb., 147.
 Gruss an Aachen, D.Poly., 34, 42, 195.
 Gruss an Freundorf, HW., 179.
 Gruss an Teplitz, HT., 22, 30, 34, 38, 42, 46, 49, 80, 107.
 Gwen Nash, Cl.HT., 166.
 Hadley, HT., 33, 37, 41, 44, 48, 80.
 Hansa, H.Rug., 189.
 Hardy Maréchal Niel. See Gardenia.
 Harison's Yellow, H.AB., 30, 128, 134.
 Harry Kirk, T., 29, 41, 115.
 Hawlmark Crimson, HT., 41, 80.
 Hazlewood Bros., mentioned, 20.
 Heart of Gold, H.Moyesii, 149.
 Helen Good, T., 115.
 Helen Gould, HT., 81.
 Henrietta, HT., 81.
 Hermosa, C., 49, 144.
 Hiawatha, HW., 31, 179.
 Hildenbrandseck, H.Rug., 189.
 Hippolyte Jamain, HP., 54.
 Hofgartner Kalb, C., 144.
 Hoosier Beauty, HT., 33, 41, 44, 81.
 Horace Vernet, HP., 63.
 Hortulanus Fiet, HT., 77.
 Howard, Fred H., mentioned, 128.
 Huey, Dr. Robert, mentioned, 2; quoted, 110, 211, 219.
 Hugh Dickson, HP., 29, 41, 64.
 Hume, H. Harold, mentioned, 210.
 H. V. Machin, HP., 33, 63.
 Hybrid Perpetual roses, origin of, 51; merits of, discussed, 52; Ellwanger's analysis of, 52; climate suited to, 56; budded vs. own-root plants of, 56; how to plant, 57; recommended varieties, 58; pruning, 66.
 Hybrid Sweetbriers, origin of, 145; merits of, discussed, 145; climate suited to, 146; pruning, 146; recommended varieties, 146.
 Hybrid Tea climbers, discussed, 154; climate suited to, 154; pruning, 155.
 Hybrid Tea roses, origin of, 69; merits of, discussed, 69; climate suited to, 71; recommended varieties, 72; pruning, 103.
 Iceberg, DW., 152.
 Imperial Potentate, HT., 81.
 Independence Day, H.AB.(Per.), 134.
 Insect pests discussed, 231.
 Insecticides recommended, 231.
 Interior Southern Zone, territory in, 14; rose characteristics for, 15; "cutting" roses for, 48; roses for garden decoration, 49; roses for borders, 49; roses for hedges and massing, 49; climbing roses, 50.

- International Rose-Test Garden, mentioned, 3.
 Iona Herdman, HT., 81.
 Irene Thompson, HT., 82.
 Irish Elegance, HT., 41, 45, 82.
 Irish Fireflame, HT., 82.
 Isabella Sprunt, T., 38, 45, 115.
 Isobel, H.AB.(Per.), 134.
- Jacques Porcher, HT., 82.
 James Sprunt, Cl.C., 166.
 Janney, Mrs. Joseph, Jr., mentioned, 156.
 J. B. Clark, HP., 29, 41, 64.
 Jean C. N. Forestier, H.AB.(Per.), 134.
 Jean Girin, HW., 179.
 Jeanne d'Arc, D. Poly., 196.
 Jeannie Deans, H.Sb., 147.
 Jessie, D.Poly., 30, 196.
 Joanna Bridge, HT., 22.
 John Hopper, HP., 55.
 Jonkheer J. L. Mock, HT., 33, 37, 48, 82.
 Joseph Guy, D.Poly., 34, 196.
 Joseph Hill, HT., 83.
 Josephine Thomas, 33, 37, 45, 48.
 See Seedling No. 347.
 Jubilee, HP., 64.
 Jules Margottin, HP., 55.
 Jules Margottin type, characteristics of, 54; leading varieties of, 55.
 Julia Mannering, H.Sb., 147.
 Juliet, H.AB.(Per.), 130, 131, 134.
 Julius Finger, HP., 54.
- Kaiserin Auguste Viktoria, HT., 37, 45, 48, 83.
 Katharina Zeimet, D.Poly., 30, 196.
 Keystone. See R. microphylla.
 Killarney, HT., 49, 84.
 K. of K., HT., 45, 84.
- La France, HT., 84, 202.
 La Reine, HP., 53, 64.
 La Reine type, characteristics of, 53; leading varieties of, 53.
- La Tosca, HT., 30, 84, 107.
 Lafayette. See Joseph Guy.
 Lady Alice Stanley, HT., 33, 85.
 Lady Ashtown, HT., 30, 85.
 Lady Eleanore, Cl.T., 166.
 Lady Hillingdon, T., 38, 41, 46, 115.
 Lady Maureen Stewart, HT., 85.
 Lady Penzance, H.Sb., 34, 146, 147.
 Lady Pirrie, HT., 34, 86.
 Lady Plymouth, T., 33, 37, 45, 48, 116.
 Lady Roberts, T., 41, 116.
 Lady Ursula, HT., 30, 34, 86.
 Lamarque, Nois., 38, 46, 50, 166.
 Laurent Carle, HT., 22, 37, 44, 86.
 Laurette Messimy, C., 144.
 Lemon Pillar, H.Nois., 166.
 Lena, T., 116.
 Leonie Lamesch, D.Poly., 38, 42, 45, 49, 193, 196.
 Leontine Gervais, HW., 179.
 Leopold Premier, HP., 54.
 Leuchtfeuer, C., 142.
 Lieutenant Chauré, HT., 86.
 Lillian Moore, HT., 86.
 Little Gem, M., 148.
 Lord Charlemont, HT., 87.
 Lord Penzance, H.Sb., 34, 128, 146, 147.
 Los Angeles, HT., 33, 41, 45, 87, 128.
 Louise Catherine Breslau, H.AB.(Per.), 135.
 Louise Cretté, HP., 64.
 Louise Walter, D.Poly., 34, 196.
 Louis Philippe, C., 38, 45, 49, 144.
 Lucy Ashton, H.Sb., 147.
 Lulu, HT., 87.
 LyonRose, H.AB.(Per.), 127, 128, 135.
- Mabel Drew, HT., 87.
 Mabel Morse, HT., 88.
 Magna Charta, HP., 30, 55, 64.
 Maiden's Blush. See Brenda and William R. Smith.
 Maman Cochet, T., 37, 45, 48, 110, 111, 117.
 Maman Turbat, D.Poly., 34, 196.

- Manetti stock, 56.
 Maréchal Niel, Nois., 27, 47, 50, 166, 203, 209.
 Marguerite de St. Armand, HP., 55.
 Marie Baumann, HP., 54.
 Marie Finger, HP., 54.
 Marie Pavic, D.Poly., 30, 34, 196.
 Marie Van Houtte, T., 38, 49, 117.
 Mary Lovett, HW., 35, 179.
 Mary Wallace, HW., 149.
 Massey, Dr. L. M., quoted, 236.
 Maurice Bernardin, HP., 54.
 May Marriot, H.AB.(Per.), 135.
 McFarland, J. Horace, quoted, 129, 149.
 Medea, T., 117.
 Meg Merrilies, H.Sb., 147.
 Memorial Rose. See R. Wichuraiana.
 Mermaid, H.Brac., 34, 42, 167, 170.
 Merveille de Lyon, HP., 30, 64.
 Mieze, D.Poly., 30, 34, 197.
 Mildred Grant, HT., 88.
 Milky Way, HW., 179.
 Miss Alice de Rothschild, T., 48, 118.
 Miss Edith Cavell, D.Poly., 42, 192, 197.
 Miss Lolita Armour, HT., 88, 128.
 Mlle. Eugénie Verdier, HP., 54.
 Mlle. Franziska Kruger, T., 118.
 Mlle. Thérèse Levet, HP., 55.
 Mme. Abel Chatenay, HT., 37, 48, 88.
 Mme. Alfred Carrière, H.Nois., 39, 42, 46, 50, 167.
 Mme. Antoine Mari, T., 118.
 Mme. Butterfly, HT., 88, 209.
 Mme. Caradori-Allan. See Beauty of the Prairies.
 Mme. Caroline Testout, HT., 41, 89.
 Mme. Charles Lutaud, HT., 37, 44, 48, 89.
 Mme. Constant Soupert, T., 118.
 Mme. Edouard Herriot, H.AB.(Per.), 131, 135, 139.
 Mme. Eugene Resal, C., 144.
 Mme. Gabriel Luizet, HP., 30, 55, 65.
 Mme. Jean Dupuy, T., 45, 49, 118, 126.
 Mme. Jenny Gillemot, HT., 37, 48, 90.
 Mme. Jules Bouché, HT., 33, 89.
 Mme. Jules Gravereaux, Cl.T., 167.
 Mme. Jules Grolez, HT., 90.
 Mme. Lacharme, HP., 55.
 Mme. Lambard, T., 38, 118.
 Mme. Lucien Villemot, H.Rug., 189.
 Mme. Marcel Delanney, HT., 90.
 Mme. Maurice de Luze, HT., 90.
 Mme. Mélanie Soupert, HT., 41, 90.
 Mme. Plantier, A., 30, 150.
 Mme. Rathswell, T., 38, 45, 49, 119.
 Mme. Ravary, HT., 29, 41, 91.
 Mme. Segond Weber, HT., 33, 45, 91, 128.
 Mme. Vermorel, T., 48, 119.
 Mme. Wagram, Comtesse de Tur-
 enne, HT., 91.
 Moss roses, merits discussed, 147;
 pruning, 147; recommended var-
 ieties, 148.
 Mrs. Aaron Ward, HT., 29, 91.
 Mrs. Arthur Robert Waddell, HT.,
 92.
 Mrs. Ambrose Ricardo, H.AB.
 (Per.), 136.
 Mrs. Andrew Carnegie, HT., 92.
 Mrs. Anthony Waterer, H.Rug.,
 189.
 Mrs. Bosanquet, Bour., 144.
 Mrs. B. R. Cant, T., 119.
 Mrs. Barron. See Seedling No. 3.
 Mrs. Charles Gersdorff, Cl.HT.,
 39, 167.
 Mrs. Campbell Hall, T., 119.
 Mrs. Charles Bell, HT., 92.
 Mrs. Charles Lamplough, HT., 33,
 48, 92, 124.
 Mrs. David Jardine, HT., 93, 107.
 Mrs. Dudley Cross, T., 48, 120.
 Mrs. Dunlop-Best, HT., 33, 41, 93.

- Mrs. Edward Mawley, T., 120.
 Mrs. E. T. Stotesbury, HT., 93.
 Mrs. Farmer, H.AB.(Per.), 136.
 Mrs. Foley-Hobbs, T., 41, 120, 124.
 Mrs. Frank Bray, HT., 38, 45, 93.
 Mrs. Fred Cook, H.AB.(Per.), 136.
 Mrs. George C. Thomas, Cl.HT., 35, 42, 167.
 Mrs. George Marriott, HT., 94.
 Mrs. George Shawyer, HT., 16, 48, 94.
 Mrs. Harold Brocklebank, HT., 33, 94.
 Mrs. Henry Morse, HT., 33, 41, 94.
 Mrs. Herbert Stevens, T., 120, 124.
 Mrs. H. R. Darlington, HT., 94.
 Mrs. John Laing, HP., 30, 41, 65.
 Mrs. Joseph H. Welch, HT., 95.
 Mrs. Ramon de Escofet, H.AB.(Per.), 136.
 Mrs. Redford, HT., 95.
 Mrs. R. G. Sharman-Crawford, HP., 65.
 Mrs. S. K. Rindge, HT., 95, 128.
 Mrs. Taft. See Antoine Rivoire and Mrs. W. H. Cutbush.
 Mrs. Wemyss Quin, H.AB.(Per.), 136.
 Mrs. W. H. Cutbush, D.Poly., 30, 42, 197.
 Mrs. William C. Egan, HT., 33, 95.
 Murrell, R., quoted, 192.
 New Century, H.Rug., 189.
 Niles Cochet. See Red Cochet.
 Noella Nabonnand, Cl.T., 38, 168.
 Noisette roses, origin of, 155; merits of, discussed, 156; climate best suited to, 156.
 Northern Zone, territory in, 6; characteristics of roses for, 7; "cutting" roses for, 28; roses for garden decoration, 30; roses for borders, 30; roses for hedges and massing, 31; climbing roses, 31.
 Nova Zembla, H.Rug., 189.
 Old Blush, C., 30, 144.
 Old-Gold, HT., 34, 95.
 Ophelia, HT., 22, 30, 33, 41, 70, 96.
 Orange King, D.Poly., 192.
 Orleans, D.Poly., 38, 49, 197.
 Own-root roses, advantages of, 201.
 Pacific Northwestern Zone, territory in, 9; rose characteristics for, 10; "cutting" roses for, 41; roses for garden decoration, 41; roses for borders, 42; roses for hedges and massing, 42; climbing roses, 42.
 Pacific Southwestern Zone, territory in, 11; rose characteristics for, 12; "cutting" roses for, 44; roses for garden decoration, 45; roses for borders, 45; roses for hedges and massing, 46; climbing roses, 46.
 Pactole, Nois., 156.
 Padre, HT., 96.
 Papa Gontier, T., 120.
 Parsons, S. B., quoted, 51; mentioned, 126.
 Paul Neyron, HP., 29, 53, 65.
 Paul's Scarlet Climber, HW., 35, 179.
 Paul Transon, HW., 180.
 Pax Labor, HT., 97.
 Peach. See Brenda.
 Pemberton, J. H., mentioned, 126.
 Penzance, Lord, mentioned, 145.
 Perfume of roses discussed, 22.
 Perle d'Or, D.Poly., 42, 197.
 Perle des Jardins, T., 121.
 Perle des Rouges, D.Poly., 45, 197.
 Pernet-Ducher, J., mentioned, 127.
 Persian Yellow, H.AB.(Per.), 30, 31, 127, 128, 136.
 Pharisaer, HT., 41, 97.
 Pierre Notting, HP., 54.
 Pink Cécile Brunner, D.Poly., 197.
 Pink Cherokee, H.Læv., 38, 46, 168.
 Planting roses, 222; distances apart, 214, 220.
 "Practical Book of Outdoor Rose-Growing, The," mentioned, 2.

- Prairie Queen. See Beauty of the Prairies.
- Prairie Rose. See *R. setigera*.
- Premier, HT., 97.
- President Smith. See William R. Smith.
- President Taft, HT., 37, 48, 97.
- Prince Camille de Rohan, HP., 54, 65.
- Prince de Bulgarie, HT., 97.
- Prof. C. S. Sargent, HW., 31, 180.
- Propagation of roses, 199.
- Pruning rose plants after planting, 224.
- Purity, HW., 180.
- Purple East, H.Mult., 180.
- Pyle, Robert, quoted, 232.
- Queen Mab, C., 143, 145.
- Queen of Fragrance, HT., 98.
- Queen of the Prairies. See Beauty of the Prairies.
- Radiance, HT., 33, 37, 45, 48, 98, 209, 210.
- Ragged Robin. See Gloire des Rosomanes.
- Ramona. See Red Cherokee.
- Rayon d'Or, H.AB.(Per.), 136.
- Recommended classes of roses for various zones, 206.
- Red Cap. See Rodhatte.
- Red Cherokee, H.Læv., 38, 46, 168.
- Red Cochet, T., 37, 44, 48, 121.
- Red Gloire de Dijon. See Reine Marie Henriette.
- Red-Letter Day, HT., 22, 34, 98.
- Red Radiance, HT., 33, 37, 44, 48, 99.
- Regeliana. See *R. rugosa rubra*.
- Reine Marie Henriette. Cl.T., 35, 168.
- Reine Olga de Wurtemberg, Cl.HT., 50, 168.
- Reve d'Or, Nois., 38, 39, 42, 46, 50, 168.
- Rev. F. Page-Roberts, HT., 99.
- Rev. Williamson, H.AB.(Per.), 136.
- Rhea Reid, HT., 37, 99.
- Richmond, HT., 99.
- Robert Huey, HT., 31, 100.
- Robin Hood, HT., 33, 100.
- Rodhatte, D.Poly., 198.
- Rosa acicularis, 30, 150.
- R. alpina*, 105.
- R. altaica*. See *R. spinosissima altaica*.
- R. centifolia*. See Cabbage Rose.
- R. gallica*, 30, 153.
- R. Hugonis*, 30, 31, 49, 150, 186.
- R. foetida*. See *R. lutea*.
- R. lucida*, 151.
- R. lucida alba*, 151.
- R. lutea*, 127.
- R. macrantha*, 42, 151.
- R. microphylla*, 150.
- R. Moyesii*, 42, 151.
- R. pendulina*. See *R. alpina*.
- R. rubiginosa*, 31, 147.
- R. rubrifolia*, 151.
- R. rugosa*, 127, 186.
- R. rugosa alba*, H.Rug., 31, 190.
- R. rugosa atropurpurea*, H.Rug., 34.
- R. rugosa magnifica*, H.Rug., 190.
- R. rugosa repens rosea*, H.Rug., 31, 190.
- R. rugosa rubra*, H.Rug., 31, 190.
- R. setigera*, 31, 180.
- R. spinosissima altaica*, 151.
- R. virginiana*. See *R. lucida* and *R. lucida alba*.
- R. Wichuraiana*, 31, 181.
- R. xanthina*, 42, 151.
- Rose a Parfum de l'Hay, H.Rug., 189.
- Rose Annual, American, referred to 3, 18, 20, 127, 148, 149, 207, 210, 211, 233, 236, 237.
- Rose Annual, English, referred to, 20, 186.
- Rose-beds, how to make, 213; drainage, 217.
- Rose Bradwardine, H.Sb., 147.

- Rose Marie, HT., 33, 37, 41, 45, 48, 100.
- Rose-garden, formal, suggested arrangement of color in, 216.
- "Rose in America, The," quoted 129, 208.
- Rose Society, National, of England, mentioned, 19, 129; advantages of membership in, 240.
- Rose Society, National, of New South Wales, mentioned, 19.
- Rose Society, American, mentioned, 20, 129, 149, 234; advantages of membership in, 239.
- Rose-Zone Map, referred to, 18, 207.
- Rosenbluth, C. M., quoted, 237.
- Roseraie de l'Hay, H.Rug., 189.
- Roserie, H.Mult., 180.
- Rosomane Narcisse Thomas, T., 121.
- Ruby Queen, HW., 31, 181.
- Rose species, merits discussed, 148; recommended varieties, 149; pruning, 151.
- Rugosa roses, origin of, 184; merits discussed, 184; climate best suited to, 184; uses of, 185; pruning, 186; recommended varieties, 187.
- Safrano, T., 121.
- Salet, M., 30, 148.
- Sanders' White, HW., 31, 181.
- Schiller, Lam., 35, 181.
- Seedling No. 3, HT., 92.
- Seedling No. 347, HT., 83.
- Senateur Mascuraud, HT., 44, 101.
- Senateur Vaisse, HP., 54.
- Silver Moon, HW., 35, 181.
- Sir Thomas Lipton, H.Rug., 190.
- Snow Queen. See Frau Karl Druschki.
- Soleil d'Or, H.AB.(Per.), 127, 128, 130, 137.
- Soleil d'angers, H.AB.(Per.), 137.
- Solfatare, H.Nois., 38, 168.
- Sombreuil, T., 122.
- Source d'Or, HW., 182.
- Southeastern Zone, territory in, 8; rose characteristics for, 9; "cutting" roses for, 37; roses for garden decoration, 38; roses for borders, 38; roses for hedges and massing, 38; climbing roses, 39.
- Souvenir de Claudius Pernet, H.AB.(Per.), 33, 37, 41, 44, 137.
- Souv. de George Beckwith, H.AB.(Per.), 137.
- Souv. de Georges Pernet, H.AB.(Per.), 137.
- Souv. de H. A. Verschuren, HT., 33, 101.
- Souv. de la Malmaison, Bour., 49, 145.
- Souv. de Maria de Zayas, HT., 101.
- Souv. de Pierre Notting, T., 37, 44, 122.
- Souv. du Président Carnot, HT., 101.
- Souv. of Stella Gray, T., 122.
- Sovereign, H.AB.(Per.), 138.
- Special-purpose roses, discussed, 152.
- Species hybrids, 190.
- S. Reynolds Hole, HP., 55.
- Sulphurea, T., 122.
- Sultan of Zanzibar, HP., 55.
- Sumner, Mrs. Frank, quoted, 227.
- Sunburst, HT., 37, 44, 101.
- Sunset, T., 37, 122.
- Suzanne-Marie Rodocanachi, HP., 66.
- Tausendschon, H.Mult., 31, 182.
- Tea climbers, discussed, 155.
- Tea Rambler, H.Mult., 169.
- Tea roses, origin of, 108; merits of, 108; climate suited to, 110; recommended varieties, 112; pruning, 123; loss of popularity discussed, 124.
- The Bride. See Bride.
- The Queen Alexandra Rose, H.AB.(Per.), 131, 138.
- The Shah, HP., 55.
- Thusnelda, H.Rug., 190.

- Tip-Top, D.Poly., 34, 38, 42, 45, 49, 192, 198.
- Titania, C., 145.
- Triumphant, H.Set., 182.
- Ulrich Brunner, HP., 66.
- Ulster, HP., 66.
- Understocks discussed, 203; Brier, 203, 208; Cherokee Rose, 208; Gloire de Dijon, 208; Manetti, 203, 208; Mme. Alfred Carriere, 209; Mme. Plantier, 208; Ragged Robin, 208; R. coriifolia Frœbeli, 210; R. multiflora, 203; R. odorata, 208; R. rugosa, 208; Solfatare, 210.
- Van Fleet, Dr. W., quoted, 127; mentioned, 149, 186, 210.
- Veilchenblau, H.Mult., 31, 182.
- Victor Verdier, HP., 54.
- Victor Verdier type, characteristics of, 54; leading varieties of, 54.
- Waltham Scarlet, HT., 41, 101.
- Ward, Admiral Aaron, mentioned, 2.
- Warrior, HT., 101.
- Washington Rose-Test Gardens, mentioned, 156.
- Western Rose Company, cited, 155, 209.
- W. Freeland Kendrick, HT., 34, 41, 102.
- White Banksia, Sp., 39, 46, 169.
- White Baroness. See Merveille de Lyon.
- White Cécile Brunner, D.Poly., 38, 45, 49, 198.
- White Cherokee, Læv., 38, 46, 169.
- White Dorothy, HW., 182.
- White Dorothy Perkins. See White Dorothy.
- White Maman Cochet, T., 37, 45, 48, 122.
- White Tausendschon, H.Mult., 31, 182.
- "Wild roses," 148.
- William Allen Richardson, Nois., 27, 35, 39, 42, 46, 50, 169.
- William F. Dreer, HT., 33, 102, 128.
- William R. Smith, T., 37, 48, 123.
- William Shean, HT., 102.
- Willowmere, H.AB.(Per.), 138.
- Winnie Davis, HT., 102.
- Winter Cheer, Cl.HT., 46, 169.
- Wolfe, Mrs. H. W., mentioned, 211.
- Wood, W. C., mentioned, 15.
- Xavier Olibo, HP., 66.
- Yellow Baby Rambler. See Eugenie Lamesch.
- Yellow Banksia, Sp., 39, 46, 169.
- Yellow Cécile Brunner. See Perle d'Or.
- Yellow Tausendschon. See Goldfinch.
- Young, Mrs. H. E., quoted, 223.
- Yvonne Rabier, D.Poly, 30, 198.
- Zephirine Drouhin, H.Bour., 35, 39, 42, 169.

635.9333
T456

635.9333 T456



a39001



007453866b

